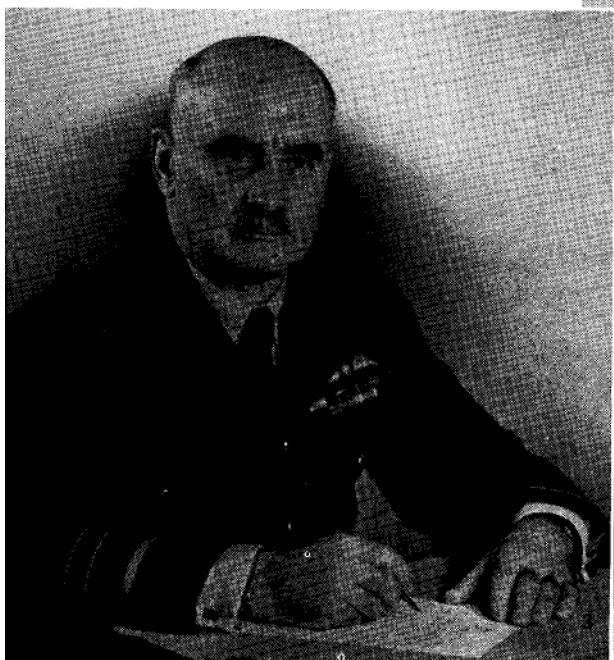


THE R.C.A.F. OVERSEAS
THE FIRST FOUR YEARS



SENIOR OFFICERS, R.C.A.F. OVERSEAS: 1. A/C G. V. Walsh, M.B.E. 2. G/C F. V. Heakes. 3. A/M H. Edwards, C.B. 4. A/C L. F. Stevenson.

THE
R.C.A.F.
OVERSEAS
THE FIRST FOUR YEARS

With an Introduction by

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Their shoulders held the sky suspended;
They stood, and earth's foundations stay.

A. E. HOUSMAN: *Last Poems*

PREFACE

The names of a considerable number of individuals have been included in this informal narrative, either (as in the case of squadron commanders) to distinguish units, or because of their association with the particular incidents described. They represent, of course, but a small fraction of the total number of personnel who, in the air and on the ground, have carried on staunchly, month after month, performing the deeds of heroism and endurance which are routine among the overseas squadrons of the Royal Canadian Air Force. While the limitations of space and security do not permit the inclusion of more names, this narrative is the story of (and tribute to) *all* such personnel.

In the Appendix, no decorations other than those for gallantry in action have been included. Thus, it has been necessary to omit awards of chivalry, honours in recognition of good work on the ground and mentions in despatches, both for flying and ground duties. In view of the large number of individuals and units mentioned in this volume and the fact that their names have a place in the index, it has been necessary to forego the indexing of other subjects. This course has been followed since it was felt that the majority of readers would identify passages by reference to the personnel or squadron concerned rather than to the place name or type of aircraft or operation involved. The index has also of necessity been further curtailed by the omission of certain names mentioned casually, which

have no direct connection with the story. In no instances are such omissions the names of personnel of the Royal Canadian Air Force. The editors, members of the Historical Section of the Royal Canadian Air Force, tender their apologies for any inconveniences which may be suffered by this curtailment.

The editors gratefully acknowledge the kindness of the Hon. Cyrus MacMillan, M.A., Ph.D., M.P., Parliamentary Assistant to the Minister of National Defence for Air, in reviewing the manuscript of this publication. Photographs are from the British Ministry of Information, the National Film Board of Canada, and the Royal Canadian Air Force. All photographs, other than those which bear a credit line to a commercial agency, are Crown Copyright Reserved. Except where otherwise stated, the rank and decorations given for individuals shown in the illustrations are those held on 31st August, 1943, or at the death of the individual. The lines by A. E. Housman are used by permission of the Society of Authors representing the trustees of the estate of the late A. E. Housman.

FOREWORD

The following pages are part of Canada's Epic of the Air. That Epic which, some day when the war has ended, will be written in complete detail without the restrictions of censorship, is an immortal story of initiative and courage, of sacrifice and undying devotion to duty. The present volume covers the period from February 1940 to August 1943. It is based only on such records as can now be revealed without endangering security. It is confined largely to the activities of the Royal Canadian Air Force, and does not, of necessity, describe the work of the thousands of Canadians in the Royal Air Force. Canadian flyers are fighting today on all the battle fronts of the world. Wherever they are in action, in the Royal Canadian Air Force or in the Royal Air Force, their achievements form a golden record of glory of which Canada is justly proud. Their story is precious to our country. It is my earnest hope that the pages which follow may give to our people a deeper knowledge and appreciation of our airmen's way of life, their duties, their intrepid heroism and their steadfast honour, and that the valorous deeds here recorded may be an inspiration to the young whose future responsibility will be to maintain in our beloved land the justice and the freedom for which our youthful airmen fought and died.

C. G. POWER

*Ottawa,
February, 1944.*

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GLOSSARY

- Ack ack: anti-aircraft, from the former service phonetic pronunciation of the letters A.A.
- AC1, AC2: Aircraftman First Class, Aircraftman Second Class.
- A/C: Air Commodore.
- AG: Air Gunner
- A/M: Air Marshal.
- A.O.C., A.O.C.-in-C.: Air Officer Commanding, Air Officer Commanding-in-Chief.
- A.S.I.: Airspeed Indicator.
- A.S.R.: air-sea rescue.
- A/V/M: Air Vice-Marshal.
- Bandit: enemy raider (aircraft).
- Black out: lose sight and consciousness, momentarily, when blood is drained from the brain by excessive centrifugal force encountered in pulling out too sharply from a dive or in a very tight turn.
- Bounce: take unawares from a higher altitude.
- Bowser: gasoline (or petrol) refuelling truck.
- Briefing: instructions given to fighter pilots and bomber crews before taking off on an operation.
- Buck: jump or shudder as when hit by cannon fire.
- BV.: Blohm and Voss, German aircraft.
- Cat: Catalina flying-boat.
- Ciné-gun: motion picture camera operated simultaneously with machine-guns and/or cannon; it gives a photographic record of what happens when the guns are fired and thus is of great value in the assessment of combat reports and in the study of fighter tactics, firing procedure, etc.
- Clouds, 8/10ths, 10/10ths, etc.: area of sky covered by clouds, 10/10ths being complete overcast.
- C.O.: Commanding Officer.
- Coned: caught in a concentration of search light beams.
- Coop: safety-glass hood covering pilot's seat in fighter aircraft.
- Corkscrew: take sharp action, alternately to right and left, to avoid enemy attack.
- Cpl.: Corporal.
- Datum: pre-assigned map point.
- D.C.O.: duty carried out; an abbreviation used to report completion of a routine assignment.
- Deck: ground (or sea) level.
- Dispersal area: area in which aircraft are dispersed as a precaution against enemy air attack.
- Ditch: make a forced landing in the sea.
- Diversionsary sweep: operation in which a smaller formation of aircraft flies over an area other than that attacked by the main force in order to divert the enemy's fighter defence.
- Do: any event, from an action in the air to a social gathering in the mess; if it involves, or just escapes, unpleasant consequences (aerial or social) it is referred to as a shaky-do.
- Do.: Dornier, German aircraft.
- Dogfight: confused air battle, usually involving a considerable number of aircraft.
- Drink: the sea.
- Duff: poor or bad.
- Dust-up: heated action.
- E/a, e.a.: enemy aircraft.
- Erks: Aircraftmen, the lowly but vital foundation upon which the whole Air Force is built.

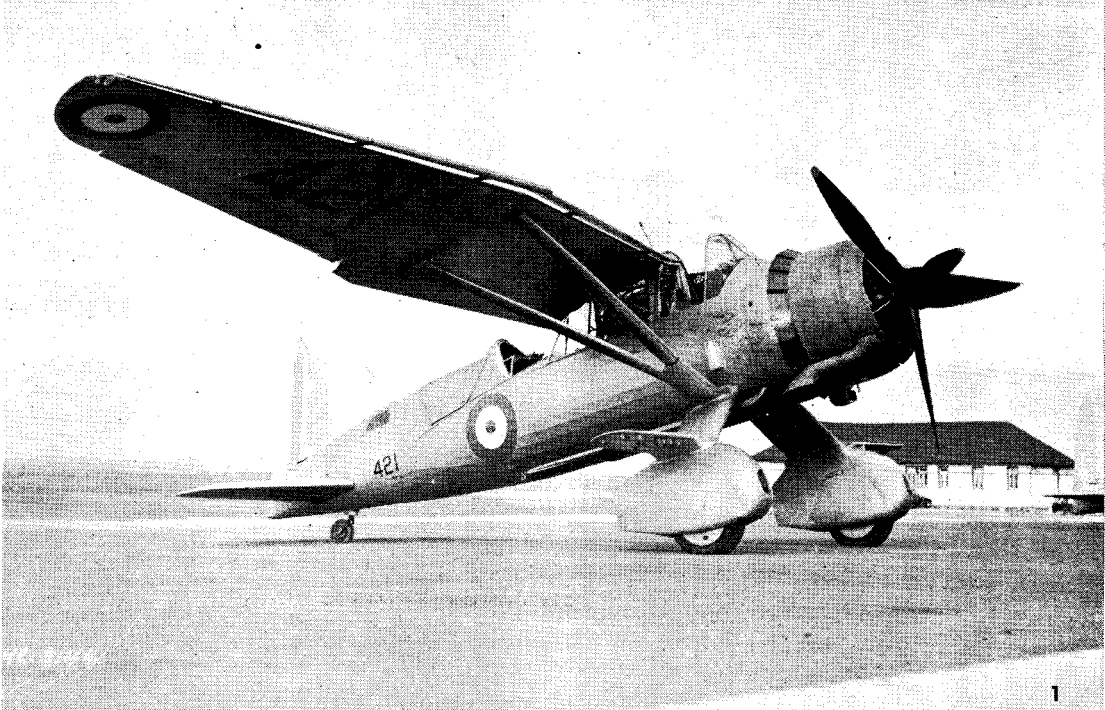
- E.T.A.: estimated time of arrival.
- Evasive action: avoiding action; aerobatics to escape from an attack or flak.
- Fix: determination of position, obtained by radio or wireless or from observation of stars or sun.
- F/L: Flight Lieutenant.
- Flak: enemy anti-aircraft fire (or gun); from German abbreviation *Fl.A.K.* for *Flugzeug Abwehr-Kanone*, anti-aircraft-gun.
- F/O: Flying Officer.
- Fort: Fortress, American heavy bomber.
- FS: Flight Sergeant.
- FW.: Focke-Wulf, German aircraft.
- G.A.F.: German Air Force.
- Gaggle: formation of aircraft.
- G/C: Group Captain.
- Gen: intelligence or information; it may be pukka or duff, *q.v.*
- Gib.: Gibraltar.
- Gone for a Burton: missing or killed.
- Gong: medal or decoration.
- Happy Valley: Ruhr Valley.
- He.: Heinkel, German aircraft.
- Hightail: move away at top speed (from fact that the tail of an aircraft going full out is always higher than the nose).
- Hurri-bomber: Hurricane fighter equipped to carry bombs.
- Intercom: intercommunication telephone linking members of a bomber's crew.
- I.O.: intelligence officer.
- Jink: take evasive action, *q.v.*
- Joe: the unfortunate; colloquially, the goat. Sometimes used as an adjective.
- Joy: night fighter's expression for attack on enemy raiders.
- Ju.: Junkers, German aircraft.
- Kampfgeschwader*: *Luftwaffe* bomber formation comprising approximately 96 aircraft; there is no R.A.F. equivalent.
- Kill: successful attack, resulting in confirmed destruction of enemy aircraft (or submarine).
- Kite: aircraft.
- LAC: Leading aircraftman.
- Let down: descend through clouds, flying on instruments.
- Luftwaffe*: German Air Force; literally, air weapon.
- Mae West: life-saving jacket; its bulges give the pilot a buxom appearance.
- Mayday: distress signal; from French *m'aidez*. *M.V.*: Merchant vessel.
- Me.: Messerschmitt, German aircraft.
- N/F: night fighter.
- O.C.: Officer Commanding.
- Oleo leg: shock-absorbing leg to which aircraft wheel is attached.
- Ops.: operations against the enemy.
- Orbit: circle.
- Pack up: cease to function.
- Perspex: shatter-proof, glass-like material used in windscreens, cockpit and gun turret covers.
- P.F.F.: Pathfinder Force.
- Piece of cake: cinch.
- Pitot head: air intake for airspeed indicator.
- P/O: Pilot Officer.
- Prang: hit, damage, smash or crash; from sound made by aircraft in a bad landing. Original meaning has been greatly expanded.
- Pukka: genuine.
- Recce, Recco: reconnaissance flight.
- Ropey: decrepit, poor, doubtful.
- R/T: radio telephone.
- S/L: Squadron Leader.
- Scramble: take off immediately on patrol; also used as a noun.
- Sgt.: Sergeant.
- Sortie: operational flight by a single aircraft; sometimes used in text as a variant for an offensive operation by bombers.
- Spinner: propeller.
- Spit: Spitfire.
- Stand-down: release from operations, *i.e.*, a day off.
- Stick: number of bombs released together.
- Stooge: literally, idle around; make an uneventful sortie.
- Strike: attack on enemy shipping.
- Sweep: offensive operation by a fighter formation to clear the air of hostile aircraft over a particular sector of enemy territory.
- Tally-ho: huntsman's call, given over R/T

- by fighter pilot as signal that he has sighted the enemy and is about to attack.
- Thornaby bag: air-sea rescue equipment, consisting of a buoyant canvas bag containing water, rations, pyrotechnics and medical supplies, dropped to survivors adrift in dinghies.
- Tin fish: torpedo.
- Top-line: fully prepared.
- U/s: unserviceable.
- U.S.A.A.F.: United States Army Air Forces.
- Vic: former service phonetic pronunciation of the letter V, traditional aircraft formation.
- W/C: Wing Commander.
- Weaver: fighter aircraft which zig-zags above and behind another aircraft or formation to guard against surprise attack.
- Wehrmacht*: German army.
- Whirlbomber: Whirlwind fighter equipped to carry bombs.
- Winco: Wing Commander.
- Wizard: excellent.
- WO1, WO2: Warrant Officer First Class; Warrant Officer Second Class.
- W.Op.: wireless operator.
- Write-off: total loss, i.e., no longer on charge to the unit.
- W/T: wireless telegraph.



ABOVE: The first R.C.A.F. squadron arrives overseas, February 1940. 110 (A.C.) Squadron disembarking at a British port. *Sport and General Photo.*

BELOW: Officers of 112 (A.C.) Squadron at Rockcliffe before departure for overseas.



1



1. Westland Lysander. 110 Squadron, R.C.A.F., was first equipped with this type.
2. G/C W. D. Van Vliet, Commanding Officer, 110 Squadron. 3. G/C W. F. Hanna, 112 Squadron. 4. G/C W. I. Clements, the first R.C.A.F. officer to see action in this war.

THE R.C.A.F. OVERSEAS
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CHAPTER I

THE EARLY DAYS OF THE R.C.A.F.

THE Royal Canadian Air Force is actually an outgrowth of the war of 1914-18, when so many of Canada's sons saw extensive service in the Royal Naval Air Service, the Royal Flying Corps and the Royal Air Force. Though many remained in the Royal Air Force with "permanent" commissions, the larger proportion of those keen young pilots and observers found their service flying experience cut short by demobilization. It is perhaps, therefore, not surprising that on surveying post-war possibilities, efforts were made to transplant the "Canadian Air Force", which had had a small beginning in England late in 1918. At that time, two squadrons of the newly authorized force, manned with Canadians who had seen service in the R.A.F., were in process of organization, but the armistice put a quietus on this first C.A.F. before it could become operational.

With the aid of a considerable donation of equipment from the Royal Air Force and somewhat grudging support from the Government, the infant force was resuscitated in Canada early in 1920. Under a small permanent instructional staff composed of repatriated pilots and observers from the R.A.F., an exhaustive programme of refresher training for former pilots was undertaken on an auxiliary or "non-permanent militia" basis.

This part-time flying programme was governed by the Canadian Air Board, which had been set up in 1919 to formulate rules for the regulation of aeronautics in Canada. On April 19th, 1920, the board was re-organized to facilitate the carrying out of its dual duty of regulating civilian aviation and administering the Canadian Air Force. With certain modifications, which from time to time became necessary, military aviation struggled on as a poor relation of civil flying until 1924, when on April 1st, six years to a day after the birth of the Royal Air Force, the Royal Canadian Air Force came into being.

Like air forces all over the world the R.C.A.F. has had its ups and downs. Government attitude varied from apathy to downright disapproval until in 1932, when world economic conditions struck a new low level, the Force was more than decimated, even though the first rumblings of 1939 could already be heard. The ensuing six years saw a constant struggle to maintain an efficient air force with little money and very limited personnel. And this despite the fact that, by 1938, all who had eyes to see could perceive the trend that events would take sooner or later-in all probability sooner. It was not until after Munich that the development of the R.C.A.F. on a realistic basis was commenced-the first step being the separation of the Force from the Army and the appointment of a Chief of the Air Staff directly responsible to the Minister of National Defence.

But like so many other nations, faced with enormous expenses for unemployment relief and other, apparently more urgent, needs, Canada had chosen to ignore the rumblings until the eleventh hour and by the spring of 1939 it was only through extreme enthusiasm on the part of the few officers and airmen of the Royal Canadian Air Force that even a semblance of life was maintained. As a result of the policy of economy, caused not only by the general economic depression and local conditions of unemployment but also, it must be confessed, by a refusal to face the stark

facts of world affairs, Canada at the outbreak of war could muster only a handful of trained officers and men and a distressingly small number of aircraft. The majority of the aircraft were sadly outmoded-and if the truth must be told had been obsolescent before they were procured for the R.C.A.F. To make matters worse, no really modern operational aircraft were available for purchase by Canada at that late date.

For these reasons, the declaration of war was even more cataclysmic for the R.C.A.F. than for the air forces of the other trusting democracies. But never for a moment was there any hesitation or any thought of Canada's not contributing to the combined war effort of the Empire. So when the proposal for the British Commonwealth Air Training Plan was broached and the agreement finally signed on December 17th, 1939, it was to a certain extent in a spirit of "We'll show you" that the Royal Canadian Air Force buckled down and proceeded to work that series of miracles which is now known as the B.C.A.T.P. Hampered, before signing, by the intricacies and pitfalls of global diplomacy, it is indeed a wonder that the ambitious programme outlined by the training agreement was ever implemented. Actually, the Royal Canadian Air Force not only fulfilled all commitments on time but even willingly undertook greater responsibilities which were completed with equal celerity and facility.

Canada was faced with the immediate task of producing a completely trained and fully efficient instructional force, a score or more times larger than the strength of the R.C.A.F. at the outbreak of war. Aerodrome development and building projects which would have appalled a less resourceful people had to be undertaken. It was accordingly decided that the overseas representation, at least for the moment, should be limited to one army co-operation squadron to work in conjunction with the Canadian Active Service Force, part of which was already in England. This de-

cision was reached in agreement with the United Kingdom so that the full efforts of the R.C.A.F. might be turned towards the production of that endless stream of trained aircrew which was the ultimate objective of the B.C.A.T.P.—an objective which, to many skeptics, seemed scarcely possible of attainment.

The magnitude of the original B.C.A.T.P. was regarded as well-nigh staggering. It called for the training in Canada of approximately 25,000 aircrew personnel per annum, the great majority of whom would be Canadians; the enlargement of the 20 existing and the construction of 60 new air fields; the establishment of more than 70 schools, depots, etc., and the provision of nearly 40,000 officers and men to operate them; all this at an estimated total cost, over a three-year period, of \$600,000,000, of which Canada's share would be approximately \$350,000,000.

But time very seldom deals gently with the plans of men and it is not at all surprising that these original intentions underwent a series of adjustments. Not only has there been an acceleration and doubling of the training plan, which succeeded beyond the fondest hopes of those who conceived it, but there are now in the United Kingdom and other theatres fully organized R.C.A.F. units which are undertaking all the varied duties of an airforce at war. These R.C.A.F. squadrons, manned with Canadian personnel and maintained completely by the Dominion of Canada, are operating as units in the larger plan of the Royal Air Force.

The R.C.A.F. Goes Overseas

February 25th, 1940, is a memorable date in the history of the Royal Canadian Air Force. It was on that day that for the first time an organized unit of the force set foot in the United Kingdom. That unit was No. 110 (Army Co-operation) Squadron.

The squadron's departure from Canada had coincided with another, more sombre, event in the history of the Do-

minion—the departure of the ashes of the late Governor-General, Lord Tweedsmuir, which were carried to Britain in one of the escorting warships.

On arrival in England, 110 proceeded to a permanent R.A.F. station near Salisbury, where it was equipped with 12 Lysander aircraft and began advanced operational training.

The four hundred-odd members of the squadron may not have been large in the mass picture of the R.A.F., but they were no small part of that Royal Canadian Air Force which so soon was to number its personnel in scores of thousands and its aircraft in correspondingly large figures. No. 110, prior to the outbreak of hostilities, had been the 110 (City of Toronto) Auxiliary Squadron and before proceeding overseas it was augmented by personnel from No. 2 (Army Co-operation) Squadron of the Permanent Force. No. 2 Squadron had been under the leadership of Squadron Leader W. D. Van Vliet, a well-known figure in athletics both during his college days and in the pre-war days of the Permanent Force. It was to Van Vliet that the honour of commanding the R.C.A.F.'s first overseas unit was given.

In July 1940 His Majesty the King approved an alliance between No. 110 (City of Toronto) Squadron and No. 603 (City of Edinburgh) Squadron.

Thus the Royal Canadian Air Force can celebrate two birthdays, April 1st, its actual birthday in 1924, and February 25th, 1940, the day of its advent overseas as a fighting force.

This was not the first incursion of the United Kingdom by Royal Canadian Air Force personnel, however, for even in the lean years before the war many members were seconded for duty and took courses with the R.A.F. At the outbreak of war the following R.C.A.F. officers were in the United Kingdom: G/C A. E. Godfrey, M.C., A.F.C., V.D., at the Imperial Defence College; W/C F. V. Heakes and

S/L A. P. Campbell in the Liaison Office; S/L W. I. Clements, S/L F. M. Gobeil and F/L J. H. Ferguson, on squadron duty with the Royal Air Force; F/Ls F. E. R. Briggs, R. C. Hawtrey, J. L. Hurley, C. L. Trecarten, and J. A. Verner, at the School of Aeronautical Engineering; F/Ls M. D. Lister and R. C. Ripley, at No. 1 Air Armament School; F/L D. G. Williams at the Electrical and Wireless School; S/L R. E. McBurney and F/L C. B. Turner at the R.A.F. Staff College; F/L F. R. Miller on a special navigation course and F/L W. A. Orr undertaking special study.

The distinction of being the first member of the R.C.A.F. to see action against the enemy belongs to Squadron Leader W. I. Clements, who, as a flight commander in No. 53 (Army Cooperation) Squadron of the R.A.F., accompanied that unit to France when it became a part of the Advanced Air Striking Force in September 1939, just two weeks after the outbreak of hostilities. On September 29th, Clements piloted one of his squadron's Blenheims on a long-distance night reconnaissance trip into Germany and, after adventuring as far as Hamm and Hanover, returned to land near Amiens with his gas tanks empty.

Another R.C.A.F. officer, S/L F. M. Gobeil, for some weeks after the outbreak of war, commanded 242 Squadron. In October 1939 this unit was named the 242 (Canadian) Squadron and under the leadership of the legless Englishman, S/L Douglas Bader, D.S.O., D.F.C., did amazingly good work in the early months of the war. 242 was made up of a few of the numerous Canadians who, spurred on by their desire to fly and unable to find a place in the small peacetime air 'force of their own country, were accepted for service by the R.A.F. before the outbreak of war. Thus, while for a time 242 Squadron may have been All-Canadian and its designation as a Canadian squadron was a graceful tribute by the R.A.F. to its personnel from the Dominion, it was not an R.C.A.F. unit nor were its personnel members of the Royal Canadian Air Force.

During the Battle of France and, later, during the Battle of Britain, 242 Squadron added to the lustre of the name of Canada by its exploits. Of its pilots, W. L. McKnight, J. B. Latta, P. S. Turner, N. K. Stansfeld, G. P. Christie, H. N. Tambllyn and R. D. Grassick were among the first Canadians to join their predecessors of the Great War in Canada's Aviation Hall of Fame. All were awarded the Distinguished Flying Cross.

It was logical that the first Canadian squadron to go overseas as a unit should be an army co-operation squadron designed to work in close contact with the Canadian Army. Many wondered at the time why a fighter unit had not been selected, since it was in the fighter squadrons of the last war that Canadians so distinguished themselves and men like Barker, Bishop and Collishaw achieved lasting fame. 110, as a representative of the auxiliary, or "Saturday afternoon" squadrons, went overseas filled with anticipation of early action and imbued with enthusiasm at the prospects of a good scrap. But this was not to be and for many weary months they continued training on their sturdy Lysanders, while their more fortunate fellow Canadians serving in R.A.F. units saw considerable action with the Advanced Air Striking Force in France.

One of the original officers of 110 Squadron who went through month after month of the depressing monotony of training, while later arrivals in England were going into action, has this to say of the weary grind:

Army co-operation training required a thorough knowledge of army organization—one of the duller subjects even to army personnel—and training in army tactics, at a time when we knew them to be obsolete in the light of newer methods employed by the enemy.

This monotonous routine took place when the Battle of Britain was at its height; when the enemy was being fought and bested by our friends in fighters. To add insult to injury we saw R.A.F. army co-operation pilots transferred to fighter squadrons and join the battle in the air, while we continued our fight by locating and reporting six fig-

ure pinpoints of a hay-rick or a cross-roads; or sat in class rooms memorizing the number of three-ton lorries in an army engineer company.

Our life was not the happiest and the only thing that kept us going was the hope that some kind soul might recognize our "sterling qualities", take pity on us, and in some way get us into the fight.

Four months after the landing of 110 Squadron two other units arrived. They were 112 Auxiliary (Army Co-operation) Squadron, of Winnipeg, and No. I (Fighter) Squadron, a Permanent Force unit which also included auxiliary personnel from 115 (Fighter) Squadron of Montreal. No. I Fighter was under the command of Squadron Leader E. A. McNab, while the commanding officer of 112 Squadron was Squadron Leader W. F. Hanna. The arrival of these two squadrons practically coincided with the fall of the Low Countries and France, as the advance party arrived on May 29th and the main party on June 21st.

CHAPTER II

THE BATTLE OF BRITAIN

VIEWED in retrospect, the Battle of Britain suggests a raging storm at sea. Towering billows sweep in to crash upon the sea wall, expend their strength and, in the fury of their defeat, burst into clouds of flying spray, then tumble back in disordered confusion into the sea. Between the billows, smaller waves arise to hurl themselves even more ineffectually against the same sea wall. One after another the assaults of the sea are checked and hurled back until gradually the storm subsides and calm again settles over the waves. When the fury abates there remains only the litter of wreckage where the more hardy of the waves have broken through the defences and wrought destruction as they spent themselves. But the sea wall still stands, battered though it be and behind it the land remains secure.

Early in, July 1940 McNab had moved No. I Squadron from its first station, in Hampshire, to Croydon, that vast landing ground on the outskirts of London which was familiar in the happier days of peace to all travellers using air transportation to or from the Continent. It was at Croydon that the final steps were taken to make No. I the efficient, hard-hitting fighter unit which it later turned out to be. Here, the Hurricanes were camouflaged and given their squadron markings, and the pilots began a six weeks' pro-

gramme of intensive training.

When the German offensive opened on August 8th, the squadron was just completing its operational training, under arrangements made by the squadron commander whereby his pilots would fly to near-by Northolt each morning to receive further instruction under the supervision of the Air Fighting Development Unit. Their days were spent at Northolt, but each evening as they returned to Croydon it was only natural that they should fret for the end of training and the opportunity to participate in the air battles then being fought.

During this period McNab and one of his flight commanders, F/L G. R. McGregor, were attached to III R.A.F. Squadron, who also flew Hurricanes, to gain operational experience before leading No. I in the Battle of Britain.

In the first phase¹ of the aerial offensive which has come to be known as "The Battle of Britain", the Luftwaffe had suffered such serious losses in men and equipment that on August 15th it changed its tactics and began an all-out assault on aerodromes in south-eastern England. The reasons for this change were not far to seek. In one short week the German Air Force had suffered so seriously at the hands of the R.A.F. that if their immediate and all-embracing plans for the conquest of England were to meet with any degree of success the early elimination of the "*verdammt R.A.F.*" must be encompassed without delay. For unless the skies over England were free for the incursion of the bombers there was no hope of success for the great plan of subjugation by annihilation.

On the afternoon of August 15th, III Squadron was ordered up from Croydon to intercept a large formation of Dornier 215s with an escort of Messerschmitt 109s. It was on this day that McNab made his first operational flight, and this sortie was thus the R.C.A.F.'s first actual participa-

¹ Since No. I Squadron was still being trained operationally this phase of the battle is not dealt with in this narrative.

tion in the battle. Realizing that air leadership cannot be acquired in other than the school of hard experience, the O.C. of No. I very wisely decided to serve an apprenticeship before graduating to the class of formation leader. From the very first "show" he proved himself worthy of this position and justified his selection as the fighting commander of the eager Canadians. The main enemy formation was intercepted over the Dover area and the ensuing dogfight, with the lightning rapidity which characterizes all aerial engagements of the present day, moved quickly into the Thames Estuary. When all the ammunition was expended and the lace-like pattern of tracer-bullets in the sky had dissipated, three Dorniers had been destroyed, four more probably destroyed and three Dorniers¹ and one Messerschmitt damaged. In this engagement McNab was credited with one of the three enemy aircraft destroyed. His combat report, so typical of hundreds written during the Battle of Britain, stated, simply:

I was Blue 2² and took off at 1530 hours on orders to patrol Beachy Head. Two enemy bombers Do. 215 were sighted flying in close formation (at 16,000 ft. eastwards along the Thames Estuary) and I did a stern attack on them firing a short burst with no apparent effect before breaking off. On my next attack, after the first burst, the rear gunner ceased firing and the enemy aircraft started to lose height. I followed him down, firing. His engines began to smoke and he crashed in some marshy ground just west of Westgate-on-Sea. As my ammunition was used up, I returned to my base and refuelled.

Later in the day some 15 Me. 110 fighter-bombers (Jaguars) broke through to Croydon and made a low bombing attack on the aerodrome. From the German point of view it may have been a successful attack, as the bomb

¹ Usually referred to as Dos. and Mes., respectively.

² Ordinarily aircraft formations are divided into sections of three *which* are usually distinguished by a colour; thus we might have red, green, blue or yellow sections. The leader is No. 1, his right-hand man 2 and his left-hand man 3.

damage was extensive; but the toll taken by British fighters was heavy. III Squadron alone destroyed four and damaged four more of the group. While this action was taking place, the pilots of No. I were at Northolt, training, and when they returned they found their armament and orderly rooms completely demolished. A fire had been started in the armament stores and the exploding ammunition presented a pyrotechnical display worthy of the Crystal Palace, but the fire was brought under control and extinguished within thirty minutes. Two of the squadron's ground staff suffered minor injuries in this attack. The war had arrived on their doorstep!

Two days later, on August 17th, the squadron moved to Northolt and on the same day became operational-ready to undertake their share in this seemingly hopeless business of driving back the persistent hordes of the G.A.F. For nine days they stood at readiness; they scrambled¹ time and again, but no enemy aircraft came their way.

On this day and those eight long days which followed, the Canadian pilots sat in Dispersal—that bare, almost squalid, wooden hut, where present-day air crews spend so many of their waking hours. In those days, before the introduction of the raucous and omnipresent Tannoy (public address system) by means of which “invention of the devil” the C.O. transmits his orders to all branches of the unit, the pilots lay around and waited for the telephone to ring—and hence the phrase, descriptive of their mental condition, that “they lay around with telephones ringing in their bellies”. The long hours in dispersal, when the unit is at readiness, are much more wearing on fighter aircrew than are the short periods of their scrambles—or the longer sorties of their brothers of the bombing units.

For a week, enemy raids were on a small scale, but on August 24th large-scale attacks broke out again with fighter

¹ When at readiness, the pilots remain at dispersal point and, when ordered into the air, are said to “scramble”.

aerodromes and aircraft factories as their main objectives. And still No. I patrolled the sector over Northolt! For two days they were not allowed to intercept the enemy operating in another sector for fear of leaving the vital Northolt aerodrome unprotected. But on August 26th the squadron was ordered to North Weald to relieve one of the sorely pressed R.A.F. units. The first patrol of the day was unexciting and it was a browned off (the layman would probably call it "fed up") lot of pilots who landed, firm in the conviction that their lot was to be stooging (uneventful flying over a patrol area) rather than fighting. However, their second patrol was more productive when they were directed to intercept a raiding force of from 25 to 30 Dornier 215s, escorted by a force of Messerschmitt fighters, approaching from the north-east at 14,000 ft. The bandits were first attacked by a Spitfire squadron and the fighter escort drawn off. The Dorniers belonged to No. I, and its pilots took full advantage of their opportunity.

McNab led his Hurricanes into the sun in line astern, climbed, shifted the formation to sections in echelon to starboard and dived on the quarry from 16,000 ft., with all guns blazing. McNab destroyed the bomber on the left wing of the enemy formation, but was forced to land as his own aircraft had been damaged by the Hun's return fire. F/O R. L. Edwards, flying as Blue 2 next McNab, opened fire from extremely close range on the next Do. in line and shot off its tail assembly. But the enemy rear gunners had found their mark on Edwards's Hurricane and he went spinning down out of control, crashed and was killed. Another Hurricane, flown by F/O J. P. J. Desloges, was also damaged in the combat, but, like McNab, he was able to make a safe landing. Meanwhile Red section, led by McGregor and made up of F/Os H. DeM. Molson and A. D. Nesbitt, engaged the enemy. McGregor destroyed one Do. and each of his section mates damaged another. In another section, F/L V. B. Corbett and F/O T. B. Little each

damaged a bomber. Thus, in their squadron's first encounter with the enemy, the R.C.A.F. pilots, with a score of three Dorniers destroyed and four damaged, proved worthy successors of the great Canadian air fighters of the past. Their losses were one pilot killed (F/O Edwards), one Hurricane destroyed and two damaged. The squadron returned to Northolt at dusk.

The next four days gave the Canadians a breathing spell. But on August 31st, while they were patrolling the Dover coast at 22,000 ft., they were attacked out of the sun by high-flying Messerschmitts and three of their number were shot down. So rapid and accurate was the attack and so deadly the fire of the enemy that only two of the Canadian fighters were able to bring their guns into action. The pilots of the three Hurricanes that were shot down baled out. Of these, F/O W. P. Sprenger landed uninjured, while Corbett and F/O G. G. Hyde received burns about the face, hands and legs. This was a costly lesson in the hard school of experience.

The squadron was scrambled a second time on the same day and over Gravesend intercepted a large formation of bombers protected by a strong fighter escort. Blue section, composed of F/Os R. Smither, Little and B. E. Christmas, was split up in an endeavour to avoid the heavy anti-aircraft fire from our own guns and each pilot attacked one of the escorting Me. 109s individually. The result was that Christmas and Little each destroyed a Messerschmitt and Smither damaged a third. On the same scramble F/O J. W. Kerwin destroyed a Do. 215 and F/O B. D. Russel damaged a second. In this engagement Desloges was shot down in flames and was severely burned on the face, hands and legs before he could abandon his aircraft.

On the next day, September 1st, the Luftwaffe made four forays against the vital aerodromes, but they were considerably weaker and the German pilots showed little inclination to press home the attacks. In the early afternoon,

when 160 aircraft crossed the coast over Dover and struck inland towards Biggin Hill and Kenley, 11 fighter squadrons were ordered up to engage them. McGregor and nine other pilots of No. 1 were scrambled and intercepted a force of over 20 bombers, protected by a strong fighter screen, approaching Biggin Hill at 18,000 ft. In a head-on attack the Canadians broke up the formation. McGregor destroyed one bomber and probably destroyed another and Peterson, Christmas and Kerwin each damaged one of the bandits. The scattered remains of the Hun formation turned tail and ran for the coast. Following his success against the bombers, Kerwin intercepted a line of eight Me. 110s hot on the tails of two Hurricanes and dived on them from above, firing burst after burst. One Messerschmitt went down, but Kerwin's own kite was hit by cannon shells and set on fire. He was forced to bale out and landed in a field near Maidstone, suffering from face and hand burns. F/O A. Yuile also had to abandon his aircraft, while F/O E. Beardmore, whose Hurricane was severely damaged by cannon fire, was able to fly back to base.

The combat over Biggin Hill ended seven days of action for No. 1 Squadron, during which it had fought four engagements, destroyed eight German aircraft, probably destroyed another and damaged nine.¹ Against this must be placed the squadron's losses of one pilot killed, four injured and seven aircraft destroyed.

The events of September 4th could not have been arranged better had they been deliberately staged. For on this day a party of Canadian journalists visited the squadron and had impressed on them the very vital part being taken by the "Fighting First" in the defence of Britain. The events of the whole day moved like clockwork, for scarcely had the newspapermen arrived than 11 aircraft of the squadron were scrambled to intercept a raid of from 12 to 15 Me. 110

¹ Of these aircraft, 14 were bombers (Do. 215s), 3 were single-engine Me. 109s and the other a twin-engine Me. 110.

Jaguars over East Grinstead. The actions of the invaders were ample proof that they had learned a lesson in the earlier stages of the Battle of Britain, for immediately the Hurricanes were observed the Nazis formed a defensive circle. By this manoeuvre, in direct contravention of the rule that "offence is the best defence", the Huns lost the first round of the battle. It allowed the Canadian leader, McGregor, more freedom of action and he took his formation into the sun 3,000 ft. above the bandits, from which point of vantage he ordered individual attacks on the circling Nazis. The results were none other than might be expected. Two enemy aircraft were shot down, a third was probably destroyed and six others were damaged. The victors in this engagement were Nesbitt and Smither, each of whom accounted for one in flames. Russel was credited with one probably destroyed, Molson with two damaged and McGregor, Peterson and Smither with one each damaged, while Russel was also credited with damaging a Ju. 88. The encouraging note in this scramble was that a brilliant victory was won by the Canadians without the loss of either aircraft or personnel. And thanks to the co-operation of the enemy, the Canadian newspapermen had an excellent story to cable home to their papers!

As a result, no doubt, of the lack of decisive success which attended this second phase of the Battle of Britain—the Luftwaffe's attacks on our aerodromes and aircraft factories—the third phase, the attack on London, began on September 7th. When the first of the mass raids penetrated to London, No. 1 Squadron was on patrol over its own base at Northolt. To guard against any possible attack on that highly strategic fighter aerodrome, Fighter Command again would not allow the squadron anything more exciting than a watching brief. The thoughts of the Canadian pilots on that day were much the same as on that other day over Northolt when their patrol was directed in just the same way—and their language, probably, was even more lurid! So



1. G/C G. R. McGregor, D.F.C. 2. W/C B. D. Russel, D.F.C. 3. G/C E. A. McNab, D.F.C. 4. A/M W. A. Bishop, V.C., chats with pilots of No. 1 Fighter Squadron during the Battle of Britain. *Sport and General Photo.* 5. R.C.A.F. pilots race to their Hurricanes in a "scramble" take-off. *Fox Photo.*



His Majesty the King meets fighter pilots of No. 1 Squadron, Royal Canadian Air Force, during the Battle of Britain.

while other squadrons had numerous engagements the Canadians simply stooged up and down over their base in an uninteresting but very necessary protective patrol. However, McNab was luckier than the pilots of his squadron, for later in the day, while flying alone, he espied five yellow-nosed Me. 109s flying at 18,000 ft. between Tonbridge and Maidstone. McNab dived on the rear plane in the formation and attacked it. He was credited with a probable.

Two days later, on September 9th, a second large-scale raid, estimated at from 300 to 350 aircraft, was directed against the capital and this time the Canadians were allowed to participate. This raid, which took place in the late afternoon after an uneventful morning, struck across the south-east coast towards London. It was a varied attack, for some of the bomber formations had fighter escorts in very close attendance while others were unescorted and were merely covered by groups of distant high-flying fighters. That Fighter Command considered this a dangerous raid, which must be broken up, is borne out by the fact that 26½ squadrons were scrambled to the attack. With such a strong defending force it is not surprising that the raiders were able to drop only a few bombs on the objective before being dispersed.

Prior to the bombing, 12 pilots from No. 1 had been scrambled and ordered south to meet the raiders. McNab, leading the Canadians, sighted a large number of bombers over the Guildford-Redhill area flying above and to the south of the Hurricanes. With throttles wide open and forcing every last mile of speed of which his aircraft were capable, he led his formation in pursuit. Before arriving at its objective, McNab's formation ran into the fighter escort of another raid and a battle royal ensued. In the encounter, which soon developed into a screaming dogfight, one Me. 109 was destroyed by Peterson, two were damaged by F/O P. W. Lochnan and one by McNab. So successful was Peterson's attack and at such close quarters was it fought that

his propeller was damaged and his windscreen broken by fragments of the Me. 109, which had blown to bits under his fire. Fragments of glass and perspex cut his face and so obscured his vision that he lost 11,000 ft. before he could see his instruments and when he regained control he was only 1,500 ft. up. Naturally, he returned to his base with all possible speed—and fortunately without serious injury. A second pilot, F/O W. B. M. Millar, was not so successful, as he was forced to bale out of his flaming Hurricane and was taken to hospital with a leg wound and burns.

Again, on September 11th, the Luftwaffe renewed its attack on London with a force of 250 or 300 aircraft while smaller forces made diversionary raids on Portsmouth and Southampton. Using the tactics which have since so characterized both the G.A.F. and the R.A.F., the Luftwaffe sent a small force as a feint towards the capital and followed this up half an hour later with two waves of approximately 100 bombers each.

The large formation turned north over Tunbridge Wells direct for the London docks. The Isle of Dogs, Deptford and Barking were bombed, but as 17 of the 19 fighter squadrons ordered up made contact with the enemy the attack was soon broken up. McNab was leading four sections of the fighter defence and at 1615 hours intercepted a formation of from 15 to 20 bombers, mostly Heinkel IIIs, flying south at 14,000 ft. in the vicinity of Tunbridge Wells. The original attack was made in echelon and so scattered the enemy formation that the Canadians were able to continue individual combats. In the dogfights which followed, McNab damaged one He. III and McGregor destroyed one, thereby bringing the scores of both pilots to five. In addition, Molson and Yuile each destroyed a Heinkel and a third was damaged by McNab and Christmas. In this encounter two of our Hurricanes were lost when Little made a successful parachute landing, despite a wound in the leg, and Lochnan crash-landed near Romney. Though his air-

craft was destroyed, Lochnan himself escaped injury.

For three days the air was relatively quiet, but this was just a respite before a further outbreak of the storm when, on Sunday, September 15th, 500 enemy aircraft crossed the Channel in two waves with the intention of dealing a final crushing blow against London. But this effort was no more successful than its predecessors and actually marks the turning point in the Battle of Britain, for on this day the Royal Air Force destroyed 185 of the enemy as against a loss of 27 R.A.F. aircraft—the pilots of 11 of which were missing or killed and the same number wounded or injured.

No. 1 stood at readiness all day and had a part in two actions against the attackers. The first of these attacks was at noon over Biggin Hill, when the squadron was “bounced” from the sun by a formation of Me. 109s (apparently the lesson of August 31st was forgotten). So strong and so unexpected was the attack that our formation was badly broken up and only two pilots were able to close with the enemy. Nesbitt fired a long burst at close range into one Me., which fell in flames, but he himself fell victim to another Hun and was shot down out of control. After baling out of his burning Hurricane he came to earth near Tunbridge Wells with head injuries. F/O Smither was shot down and killed in this engagement.

Two and one-half hours later the noon defeat was fully avenged, when McNab, leading a formation of 12 Hurricanes, intercepted 15 to 20 He. IIIs accompanied by a strong fighter escort flying at 16,000 ft. over London. Apparently the Messerschmitts had “just come along for the ride”, as they made little effort to drive off our aircraft. On this sortie, McNab destroyed a bomber and one was shared by Lochnan and 229 Squadron; two probables were scored by McGregor and Russel and two more damaged by McNab and P/O P. B. Pitcher. Norris was credited with a probable when a yellow-nosed Me. 109 was shot down with smoke pouring from it. These gains were not achieved

without loss, for Yuile was hit in the shoulder. Although wounded, he succeeded in bringing his Hurricane back to base. Both wings of McGregor's machine were damaged by return fire when he was closing in on his Heinkel victim.

During the next ten days, from September 16th to 26th, the squadron was constantly on the alert and was scrambled many times but made few interceptions. On the 17th, the Caribou Squadron, as No. 1 was often called, was scrambled four times and on one occasion encountered some Me. 109s, but as they were being fully taken care of by a Spitfire formation, the Hurricanes did not engage. On the following day the squadron had several scrambles, which were productive of little more action, since the new tactics of the Luftwaffe involved their fighters remaining well above 20,000 ft., at which height the Hurricanes lost power and manoeuvrability. Despite this superiority in height the Messerschmitts showed little or no desire to engage and contented themselves with stooing around with a show of strength but little offensive spirit. On one of these scrambles, Beardmore became detached from the squadron and while flying with 229 Squadron was forced to take to his parachute and suffered slight injuries on landing. In one engagement Peterson was credited with one Me. 109 destroyed and one probably destroyed, after having climbed to 27,000 ft. in an effort to meet the G.A.F. on its own level.

The new tactics of the Luftwaffe brought forth different methods of attack on the part of the R.A.F. and closer wingformation flying became the order of the day. Wing attacks were found to be a much more effective method of breaking up large enemy formations and destroying individual aircraft. No. 1 practiced the new formation continuously with their station mates, 229 and 303 (Polish). The Polish squadron was led on many occasions by a Canadian member of the R.A.F., F/L J. A. Kent, D.F.C., A.F.C. No. 1's first operational sortie in wing formation took place on

September 21st and after a certain amount of misunderstanding as to the method of carrying out the movement, got under way, but made no interceptions. On the 23rd, while again in wing formation with 229 and 303, a large group of Me. 109s was sighted but remained aloft and could not be reached. On the 25th, after the customary wing formation, Peterson and Russel were despatched to intercept a single enemy aircraft, a Do. 215. They drove it into the sea—the Observer Corps confirmed their claim.

On September 26th, Northolt was honoured by a visit from His Majesty the King, who thanked all three units on the station for their part in the Battle of Britain.

With the visit of His Majesty ended the ten-day interlude of quiet daylight hours—the nights were never quiet. On the 27th the day attacks began again and during the next period Northolt, and the squadrons based thereon, spent their time diving into their kites for a scramble or a patrol—and diving in and out of shelters. The days and the nights were much alike; but they were never monotonous.

In the first assault on the 27th, shortly after 0900 hours, No. 1 was patrolling with 303 when a formation of approximately 30 Ju. 88s, escorted by from 20 to 25 Me. 109s and 110s, was sighted and so began the Canadians' most active and successful day until the raid on Dieppe nearly two years later. From early dawn, wave after wave of enemy aircraft, each wave comprising approximately 200, began crossing the Kentish coast over Dungeness. All the early morning attacks were driven back before penetrating past Maidstone and Tonbridge with the exception of one, and Nos. 303 and 1 Squadrons were ordered up to meet the threat. The combined formation intercepted the enemy between Kenley and Biggin Hill at 18,000 ft. and attacked the bombers from the rear. This move brought down some of the Me. 109s in a vain effort to protect the Junkers, while the Me. 110s formed their customary defensive circle 2,000 feet above the bombers. An epic battle ensued with Hurri-

canes diving, climbing and spitting at any raider that came in their sights. For minutes which seemed hours the pattern of tracer bullets, roaring exhausts and vapour trails bedecked the sky for miles above the green Surrey countryside. But gradually the invaders one by one fell victim to the Canadians' and the Poles' eight-gunned Hurricanes. An assessment of the individual results of this engagement is not easy, since on more than one occasion the enemy were engaged in turn by different pilots and the actual allocation of victories became extremely difficult. But when the smoke had cleared and the damaged Hurricanes and Spitfires returned to their base, 6 enemy aircraft had been destroyed by the Canadians while one was listed as probable and one as damaged.

Stripped of all glamour and glory, the individual combat reports of the pilots concerned set forth in laconic words a glorious epic of present-day war. All McNab had to say concerning the fact that he and Blue Section, composed of himself and Christmas and F/O E. deP. Brown, had destroyed a Ju. 88, was:

I was Caribou Leader leading 4 sections No. I Canadian Squadron, and leading squadron combined with 303. Ordered to intercept raid. . . . Sighted raiders to miles due East at 18,000, turned and forced to make an astern attack. The bombers were in section threes stepped down. Attacked left hand Ju. 88 in rear section. He broke away and dropped his bombs turning towards south coast and I 'followed in with section. Two parachutes came out but man in first fell away from his, the second was badly ripped. The aircraft continued to fly south so I closed and gave z-second burst, the aircraft dived straight down and burst into flames at Limpsfield. This is claimed for Blue section (S/L McNab, F/O Brown, F/O Christmas).

McNab was scarcely more verbose in the story of his own success when he destroyed a Me. 110:

I was Caribou Leader leading two squadrons, No. I Canadian and 303. Gathered section together after attack on bomber and climbed to 18,000 feet where 20 plus Me. tto were in a defensive circle attacked

by a number of Hurricanes. I noticed a Me. 109 to break circle and head for coast. In company with another Hurricane (squadron unknown) attacked and finally Me. 110 showed flame along port side, turned onto its back and crashed in flames in area of Crowborough, although cannot identify location exactly.

Russel, who was credited with the solo destruction of a Me. 110 and a Me. 109 and with another Me. 110 which he shared with 303 Squadron, gave a slightly longer report but one which still compressed itself into a terse story of actual details:

I was flying Green 3 in Search Section when we sighted bombers and was attacked by 1 Me. 109 from the starboard beam. In dodging out of his way I joined with three tows flying in line astern. I gave No. 3 about 3 seconds burst and he fell off to the left and baled out; as he was doing so, I could not see any material damage although my burst must have hit him as I was directly beneath him and about 70 yards behind him when I fired. In my break-away I lost considerable height and I was successful in joining with Caribou leader. We climbed to attack Me. 109s which were flying in a defensive circle over Biggin Hill area. We attacked from N.E. against the circle. I got separated in this attack and attacked a smaller group, which were slightly lower to the south. I attacked a Me. 110 from slightly above and behind in a tight turn, gave him about 8 seconds burst which started the port engine on fire.

He fell away and about 4 Hurricanes set on him and he crashed somewhere in the vicinity of E. Grinstead. At this point another Me. 110 broke away and about four of us set on it. He crashed about 10 miles south of my first one in a clearing between a lot of trees. My first landed in a field behind quite a big house near a small town with a cement road running in front.

Lochnan, who shared in the destruction of a Me. 110 with 303 Squadron, was also concise:

I was Green 2 of Caribou Squadron. We sighted e/a and worked into position to attack. I was doing search about the Squadron. As I went to attack an Me. 109 I was hit by cannon and machine gun fire; half the right aileron was shot off. I started 'for home and saw a Ju. 88 being attacked. I got in one burst and held off when the three Hurricanes attacking it fired him and he crashed into a house. I climbed up to come home and saw a Jaguar (Me. 110). Joined in attack and got in

three good bursts, one a rear climbing, another a port quarter that caused smoke to pour out. Another Hurricane fired the starboard motor. We were down about 500 feet. I fired again as he was coming towards me and going down. He turned and crashed at Gatwick. I landed away from base and left my aircraft to be repaired and returned to base by a Magister.

McGregor, who was credited with the probable destruction of a Ju. 88, had this to say:

As Red i, I was leading "A" Flight when formation of 30 plus enemy bombers was sighted to N.E. with fighter escort. E/a course approx. N.W. Squadron turned north to intercept. Following Blue Section I attacked enemy bomber straggler and after short burst realized that previous fire had accounted for c/a. I broke off and after failing to re-form flight or section, proceeded N.W. after enemy bombers' formation which was still visible turning West from London. I cut. chord of circle and delivered beam attack, closing to quarter on rearmost e/a. Machine jerked hard, port engine smoked heavily and machine went into steep left hand spiral dive. I did not see crash due to avoiding other aircraft.

The other successful Canadian pilot, F/O Norris, reported:

I was Yellow 2. We got "Tally Ho" and went into V formation. We carried out an attack on a He. III. Seeing that it was destroyed our section broke away. I turned into the van and lost my section momentarily, then noticed an enemy twin-engine with our aircraft attacking it. I made a front quarter attack from below and closed to short range. I noticed bits fly off and smoke pouring out of the port engine. I broke off and noticed the Me. 110 losing altitude and broke away as it was well escorted by our own fighters.

From this notable victory the Canadians did not escape unscathed. Peterson, who, in the short space of the Battle of Britain had distinguished himself many times, was shot down and killed, while Lochnan's aircraft, as his report shows, was hit by cannon and machine-gun fire and half the right aileron was burned off. Sprenger was also shot up and forced-landed at Kenley.

With their fighter strength reduced to eight pilots, No. 1 was scrambled again at noon and in a brief engagement with about 20 Me. 109s over Gatwick, McGregor, leading the formation, damaged one of the enemy despite the fact that his pilots had been “bounced” out of the sun.

McGregor’s report on this engagement was as follows:

As Red 1, I was leading formation consisting of No. 1 Canadian and 229 Squadron . . . sighted approx. 20 Me. 109s about two thousand feet above, continued irregular patrol in sections line astern. After several minutes three 109s dived to attack leading section. Red 2 and 3 broke off to confuse attack and tog attacking Red 3 passed me close to port. I got two good bursts on him in a left and then a right turn. He spun down issuing smoke. I could not follow owing to taking avoiding action from further 109 attack.

When a third scramble was ordered, at 1500 hours, despite the almost superhuman efforts, of the ground crews to refill the tanks, reload the guns and check the multitudinous details of a fighter aircraft, only six Canadians could take the air under McGregor’s leadership to patrol the Biggin Hill-Kenley area. Soon after take-off the Hurricanes were directed to two formations of bandits and five of the six successfully brought their guns to bear on 15 to 20 Do. 215s. This raid had been part of an enemy formation of approximately 160 aircraft which had crossed the coast between Dungeness and Dover and penetrated as far inland as Maidstone but had turned north and was met by the Canadians at Biggin Hill.

During the action one of the bombers was destroyed by Brown, an American, since transferred to the U.S.A.A.F., who reported as follows:

Took off with squadron but forced to return as wheels would not come up. Took second plane up in an effort to overtake squadron. Saw squadron above and ahead about six miles away, at same time saw bandits to left (above) and ahead to the right. Started to climb and while climbing to right saw e/a below and ahead. Saw red, white and blue stripes on rudder, but saw another Hurricane make an attack. Closed in

behind e/a after Hurricane broke away. E/a was apparently not damaged by first attack as I experienced extreme gunfire when I attacked. Attacked and held firing button for 275 rounds per gun. Pieces were flying off and one engine smoking as I broke and climbed to make second attack. E/a burst into flame and dove straight for the ground. Saw e/a crash 5 miles E. of Tunbridge Wells. No person jumped out of e/a. This enemy casualty is confirmed by F/L Kent of 303 Sqn.

Four were claimed damaged by McGregor, Pitcher, Yuile and Russel, who shared the credit with 229 Squadron. McGregor also claimed another damaged. The pilots' reports on this engagement were as follows:

McGregor:

As Red i, I was leading a flight of No. 1 Canadian Squadron followed by No. 229 Squadron ... while still below ordered height sighted two formations of enemy bombers at least 5,000 feet above and 10 to 15 miles ahead. Realizing impossibility of making contact I turned west and intercepted the first formation of approx. 15 bombers which had turned West also and were then coming south. Delivered beam closing to quarter attack on leading formation's port side and saw pieces come off and smoke. Broke off and found formation broken and one 215 below and almost ahead. Delivered quarter closing to astern attack finishing ammunition. Starboard motor appeared to stop and return fire stopped. E/a went into steep diving turn to right. Throughout, a large number of 109s were above but delivered only individual attacks. I lost sight of 215 in effort to avoid surprise attack from 109s. Landed and re-armed at Biggin Hill where 1.0. reported 4 e/a down from action in sight of the base.

Russel:

I was Blue 2 in Search section. After attack on bombers over Croydon area I broke off and lost considerable height. I then gained height and chased enemy formation to the coast. Attacked e/a over coast. Was able to get a long burst in opening at about 500 yards. In the middle of my burst the e/a seemed to rear upwards and to the right but settle down again: I was forced to stop shooting as a Hurricane cut across in front of my sights. The e/a was smoking badly when I started my attack and continued smoking until he disappeared in the mist with two other Hurricanes still attacking him.

Pitcher:

I was Red 2 which was leading section of squadron. We attacked about 15 Do. 215s proceeding in a Westerly direction North East of Kenley. I attacked one Do. 215 from port quarter astern and slightly above, closing to dead astern. After several seconds of fire from astern he pulled up steeply and smoke was issuing from his engines. I broke off and made a beam deflection shot on another from starboard with no visible effect and finally one attack on same aircraft from stern above, when ammunition ran out. Time of action approx. 1515 hours. Ciné film taken.

Yuile:

I was flying Red 3 in leading section when we saw several small formations of enemy bombers, of about 12 each. We picked out one of these and went into line astern, leading 229 Squadron. Red section went into a quarter beam attack when suddenly I looked up and there was a Dornier 100 feet directly above me and going in the same direction. I pulled up sharply and gave him a full deflection burst of about three seconds, closing to about 50 yards. Then I switched and delivered a one second burst to another Dornier flying on the port wing of the first. The first aircraft pulled sharply upwards, and fell over into a starboard wing over. I then stalled completely and did a stall turn to the left, and as there were many Me. 109s about, did not see what happened to the Dornier. I experienced no apparent return fire from the Dorniers.

It is interesting to note that while the Canadian pilots claimed one destroyed and five damaged, when the wreckage was surveyed it was found that five had been destroyed and one damaged.

In all, on September 27th, the Squadron, with a total of 13 pilots available, made 26 sorties and carried out three patrols, during which they engaged 70 enemy aircraft in combat. They destroyed seven aircraft and were credited with the probable destruction of another and damage to a further seven. All this was accomplished with the loss of one pilot injured, one Hurricane destroyed and two damaged. During the day six pilots, McGregor, Christmas, Pitcher, Russel, Yuile and Brown each made three sorties

in seven hours and between them accounted for 12 of the 15 victories chalked up for the squadron. Of these, McGregor and Russel each had four successes in the course of their day's activities.

That the remainder of the British air forces were equally successful is witnessed by the fact that 133 G.A.F. aircraft were destroyed, a total only surpassed on September 15th and August 15th, when 185 and 159 respectively had been confirmed as destroyed.

On September 30th, No. I carried on the good work when they were again scrambled three times to intercept raids. But the last day of the month was not as successful as the 27th, since for a score of one Me. 109 destroyed by McGregor and one damaged by Brown, four of our own aircraft were damaged.

Thus ended, for a time at least, the hectic days of the Battle of Britain, as the German pilots no longer were willing to "come down and play" from the safe heights at which they were now flying and for days our patrols stooged around looking for trouble and finding none.

This period also saw a further change in German tactics, with the abandonment of large-scale bombing raids in favour of small formations of fast bombers escorted by large formations of fighters, so large in fact that the fighters frequently out-numbered the bombers by four or five to one. With these new tactics came also Messerschmitts carrying small bombs. But the effect of these bomber-fighters was negligible and at best can be adjudged as of little more than nuisance value. Hun formations continued flying at from 20,000 to 30,000 ft.-and our Hurricanes, which were never designed for such high flying, flew as usual below 20,000. Despite this advantage of height and notwithstanding the number of times the G.A.F. must have had "sitting birds" as targets, they showed little inclination to mix it up with the Hurricanes. Apparently they had learned their lesson!

October 5th saw the last of the mass formation bombing raids on London and coincidentally marked the end of the Battle of Britain in so far as No. 1 Fighter was concerned. Shortly before noon, McGregor led the Canadians and the Polish squadron against a formation of about 30 Me. togs and 110s south of Maidstone. Their first attack was successful and in the twinkling of an eye the sky was dotted with individual dogfights roaring and circling from 20,000 to 15,000 ft. No. 1 was signally successful in this encounter, but the official reports as presented by the pilots themselves were no more picturesque than usual.

McGregor's story of one Me. 109 destroyed was as follows:

As Red 1, I was leading squadron which was flying in lead to No. 303 Squadron. At a point 15 N.W. of Folkestone we sighted seven Me. 109s in loose line astern with others to the S.E. Manoeuvred to bring squadrons between the seven logs and coast and attacked. Several other logs and 110s joined, resulting in a dogfight which spread from about 16,000-22,000 feet. After considerable milling obtained position on tail of 109 closing rapidly. After one burst of about 8 seconds at very close range 109 smoked and pilot baled out. In further milling was unable to fire again. A few Spitfires were also present at dogfight.

Pitcher, who was credited with one Me. 109 destroyed and one Me. 110 damaged, had this to say:

I was Yellow I leading Searching Section. About ten miles East of Maidstone we engaged about 10 Me. 109s. I failed to make contact and climbed up to 21,000 ft. Near Canterbury I encountered four Me. 109s in line astern and attacked the last one in a port deflection from beam closing to astern about 100 yards. I fired about 12 seconds in three bursts, in the last burst large bits were seen to fall off e/a, his 'undercarriage dropped and he rolled on his back. No further results were observed as I was 'forced to break off, being attacked by other Me. 109s from above. At the end of the break away I made a deflection attack on the last of the three Me. 110s in line astern from above and astern at about 250 yards. I gave one burst of about four seconds and ran out of ammunition. Strong return fire was encountered. Tracers were seen to

enter'e/a, which was seen to be damaged as I broke away and dived down violently.

Christmas was credited with one Me. 109 and said:

I was Green one and after the main attack the squadron became separated. I made for the milling towards the coast. As the Me. 110 came across the coast, four Me. 109s crossed my front. I came around and fired on the leader. He started to smoke and small pieces started to come off. The e/a dived slightly and I let a final burst go into the cockpit. The e/a dived vertically towards the ground, smoking. E/a should have crashed on land near Hawkinge.

Beardmore, who was credited with one Me. 109 damaged, had this to say:

I was Green three on patrol. While at 20,000 feet near Maidstone we were attacked by Me. 109, I broke off left and finally teamed up with another Hurricane from No. 303 Squadron. We climbed up to 18,000 ft. when I saw Me. 109 coming in over the S.E. coast about 5,000 feet below me. As I was to make my attack, I saw five Me. 109s going S.W. I attacked the right rear, as I did so he and the rest of the formation did a slight turn to the right. I closed to 150 yards and fired and black smoke came from his engine as he dived straight down.

Lochnan, who was credited with one Me. 109 damaged, reported:

I was Green three of Caribou Squadron. We were engaged by Me. 109s at about 20,000 feet. I finally got into position behind one and got in two short bursts as he turned right. Bits flew off and I had to break away. A second one was behind me and I had a hard time shaking him. I was just getting back up when Me. 110s joined and everything was over before I could fire again.

Though the Luftwaffe had shot its bolt in so far as mass bomb raids on London were concerned, on the next day the home base of the Canadians was raided from 300 ft. by a single aircraft, which dropped a 1,000 lb. bomb and a delayed action bomb close by. This impudent sortie caused considerable excitement, slight material damage and some

loss of life. However, the following day the squadron avenged the insult when Lochnan shot down a Me. 109 in flames. Two days later the Fighting First was relieved and the remnants of Canada's first fighter squadron flew north to Scotland for a well earned rest.

Waves of bombers still swept in from the sea but their effects were ever diminishing and finally the last attempt to drive the British people to their knees by a concentrated hail of bombs was given up and southern England resumed the more or less even tenor of its way before the Battle of Britain.

For fifty-three days from August 17th, No. 1 Squadron was in the front line, making two or three scrambles every day and being on the receiving end of bombing attacks by day and by night. Many of the old originals were gone, some to hospitals for repairs, others gone for a Burton, the R.A.F. way of referring to a more permanent removal. New pilots had arrived to take their place—but they needed training; the ground crews, after unremitting effort in keeping the small store of aircraft fit for service for 12 long weeks, needed a breathing spell to check thoroughly and recondition the kites.

Little has been said of the unspectacular but ceaseless activity of the ground crews of No. 1. It has been said that any squadron is as strong as its weakest ground crew man. Nothing truer was ever said, for the man who tends the aircraft on the ground is just as much a part of the crew as is the man who handles the stick. They are complementary, one without the other is virtually useless. A squadron might have the best pilots in the world, but their efforts would be nullified unless the maintenance crews were of an equally high calibre. Thus the Battle of Britain, which meant three scrambles a day, possibly, for the pilots, meant endless gruelling work for the ground crews and a constant race against time to get the largest number of aircraft in the air in as short a time as possible. As the general aircraft

situation at that time was not too good, the ground crews were especially hard worked and, it may safely be surmised, put in more hours of constant attention to detail than had ever before been asked of aircraft maintenance crews—and more than it is hoped will ever be asked again. The finest tribute that can be paid to the ground crews can be seen in the daily report of aircraft serviceability: only once, on September 27th—and then only for a short time—was the squadron's operational strength of twelve aircraft seriously diminished because of unserviceable machines.

During the eight weeks that No. 1 Fighter was engaged in the Battle of Britain, the score for the Canadians was 31 enemy aircraft destroyed and many more probably destroyed—for a loss of 16 Hurricanes. Of the pilots of the 16 Hurricanes, three were killed in action and 10 wounded or injured; the others made successful escapes by parachute from their crippled aircraft. In addition, 28 Huns were officially credited as damaged.

Just before the squadron left Northolt His Majesty the King awarded the Distinguished Flying Cross to S/L E. A. McNab, F/L G. R. McGregor and F/O B. D. Russel. On these three officers rests the distinction of having been the first members of the Royal Canadian Air Force to win decorations in the present war.

CHAPTER III

EXPANSION

WITH the arrival in England of R.C.A.F. squadrons it became necessary to establish overseas, for administration and liaison purposes, a central Canadian air headquarters and a personnel records office.

During the previous twenty years (that is, the period between the 1919 demobilization and the outbreak of the present war), contact between the R.C.A.F. and the Air Ministry had been maintained through an R.C.A.F. liaison officer stationed in London. On the formation of R.C.A.F. Overseas Headquarters, effective January 1st, 1940, Wing Commander F. V. Heakes, who had been serving as R.C.A.F. Liaison Officer for some years, assumed temporary command and with a small staff made the preliminary arrangements for the reception, accommodation, equipment and training of 110 Squadron, which disembarked on February 25th.

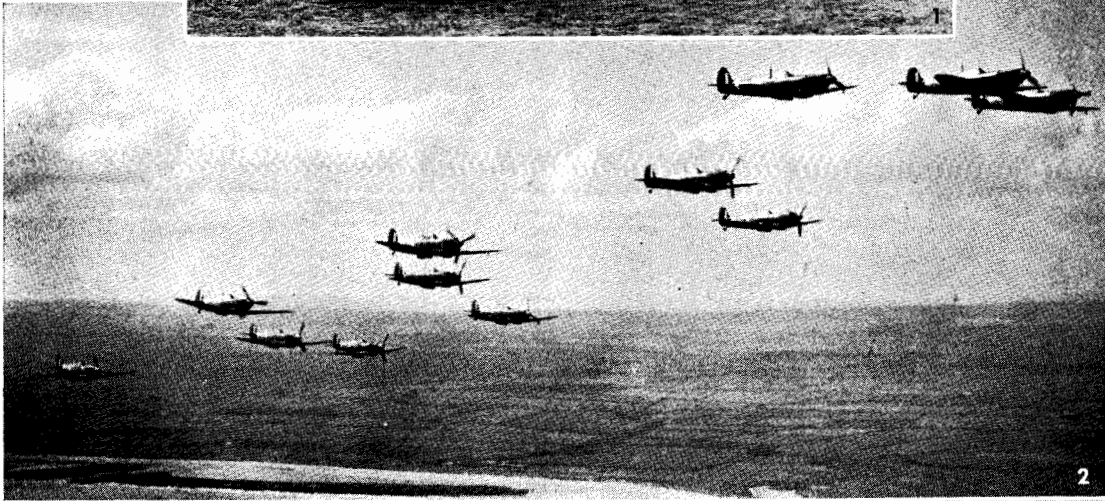
On March 7th, 1940, Group Captain G. V. Walsh, M.B.E., arrived from Canada and took over command. He was subsequently appointed Air Commodore and served as Air Officer Commanding the R.C.A.F. in Great Britain through the momentous summer and early autumn of 1940, being succeeded on October 16th by Air Commodore L. F. Stevenson.

The ensuing twelve months saw a remarkable increase

in the R.C.A.F. overseas contingent. The B.C.A.T.P. hit its stride, and many thousands of its Canadian graduates became operational with the R.A.F.; the Sinclair-Ralston amendments to the original agreement of December 1939 were signed on January 7th, 1941, and a number of the 25 new R.C.A.F. squadrons to be formed under its provisions were organized and went into action.

These rapid developments and the multitudinous problems of administration which they entailed led inevitably to a further reorganization of Overseas Headquarters, and in November 1941 Air Vice-Marshal Harold Edwards (formerly Air Member for Personnel at Air Force Headquarters, Ottawa) arrived in the United Kingdom and assumed command under the new title of Air Officer-in-Chief, R.C.A.F. Overseas. Air Vice-Marshal (later Air Marshal) Edwards served from the time of his appointment throughout the period of this narrative. In July 1942 his title was changed to Air Officer Commanding-in-Chief, R.C.A.F. Overseas.

On October 7, 1940, No. 1 Squadron's share in the Battle of Britain ended. And it was 10 months before R.C.A.F. fighter units were again engaged in any important actions. Ten months of the ceaseless grind of formation flying and circuits and bumps, as the more mundane features of practice flying are called, wherein the pilot who has difficulty in setting his kite on the ground without risk of cracking up or, to speak in Air Force terms, of pranging, tries to correct his very evident faults in this fundamental of flying. Air firing and aerobatics are among the more agreeable subjects in the training syllabus. At least the pilots get a kick out of them, and frequently work off steam, which might otherwise be used in that most illicit of all pastimes, called beating up (that is, diving upon and flying over at very low altitude) an aerodrome—which, incidentally, is most thoroughly and quite wisely frowned upon by the authorities, and carries in its wake very severe punishment. After all, a shoot-



1. OFFICERS OF NO. 1 FIGHTER SQUADRON DURING THE BATTLE OF BRITAIN (ranks as at time picture was taken). *In front:* F/O O. J. Peterson, F/O W. P. Sprenger, S/L E. A. McNab, F/O E. W. Beardmore, F/O A. D. Nesbitt, F/O B. E. Christmas. *Behind:* F/L W. R. Pollock, F/O C. W. Trevena, F/O C. E. Briese, F/O P. B. Pitcher, F/O P. W. Lochnan, F/L E. M. Reyno, F/O S. T. Blaiklock (I.O.), F/O R. W. Norris, F/O A. M. Yuile, Capt. W. D. Rankin (M.O.).

2. A squadron of Spitfires in the air.

3. "All our aircraft returned": P/O R. M. Zobell after Dieppe. 4. His Royal Highness the Duke of Kent visits an R.C.A.F. fighter squadron. 5. Desert flying kit: Sgt. G. Murray climbs into his Spitfire.



1. A Hurri-bomber in the air. 2. F/L Don Blakeslee, D.F.C. (now U.S.A.A.F.)
3. W/C R. E. E. Morrow, D.F.C. 4. F/L F. E. Green, D.F.C. 5. W/C V. B. Corbett, D.F.C.
6. F/L Don Morrison, D.F.C., D.F.M. 7. S/L Paul B. Pitcher.
8. W/C D. G. Morris, D.F.C. 9. S/L J. E. Walker, D.F.C.

up is simply a senseless, though admittedly enjoyable, way of unnecessarily staking your life against unbeatable odds.

110 and 112 Army Co-operation Squadrons and No. 1 Fighter Squadron were the only R.C.A.F. units despatched from Canada as complete units, since the huge commitments entered into, under the terms of the B.C.A.T.P. agreement, made it necessary to retain the personnel of other permanent and auxiliary squadrons for the less exciting but even more important duties of organizing the structure upon which the training plan was predicated.

The British Commonwealth Air Training Plan agreement was signed in Ottawa by representatives of the United Kingdom, Australian, New Zealand and Canadian Governments and under it the R.C.A.F. assumed the responsibility of converting the Dominion into "The Aerodrome of Democracy".¹

The procurement and training of the instructional staff required by the B.C.A.T.P. was in itself a major undertaking, and very many from among the first thousands of recruits who thronged the R.C.A.F. recruiting centres were, immediately upon their graduation or completion of training, absorbed into the training establishments in Canada as instructors and basic personnel for further expansion.

Late in November 1940 the first graduates of the B.C.A.T.P. were sent overseas—a small trickle preceding the swelling torrent of aircrew of all categories, radio mechanics and specialists in many other fields which was to follow.

The Fighting Strength Increases

As the framework of the training plan was clothed with the personnel necessary for its carrying out, and the overflow of trained personnel could be made available for post-

¹ This phrase was first used by President Roosevelt in a message addressed to the Air Training Conference of United Nations held in Ottawa in June 1942.

ing overseas, the fighting strength of the R.C.A.F. increased rapidly. Some of the aircrew were used to reinforce the three R.C.A.F. squadrons already in Great Britain, but the vast majority, after completing their training at an operational training unit in the United Kingdom, were posted to R.A.F. squadrons, until there were few R.A.F. units from Iceland to Singapore that did not contain one or more persons wearing CANADA badges on their shoulders.

The greatly accelerated movement of R.C.A.F. personnel to the United Kingdom and the distribution of this personnel among R.A.F. squadrons made the consideration of the establishment of further R.C.A.F. units a matter of prime importance if the Royal Canadian Air Force was not to lose its identity and become merely a manning division for the Royal Air Force. This contingency had been provided for in Article 15 of the B.C.A.T.P. agreement, under which discussions between the Canadian and United Kingdom governments were initiated with a view to incorporating R.C.A.F. personnel into Canadian units as far as possible. As a result of these discussions, the Sinclair-Ralston amendments were drawn up and signed on January 7, 1941. Under these provisions 25 additional R.C.A.F. squadrons, to be formed from personnel already in England and others who would, from time to time, be sent from Canada, were authorized. These squadrons were to be R.C.A.F. units, but equipment and pay and allowances of personnel, and virtually all other expenses, would be borne by the R.A.F. The great difficulty of supplying Canadian ground personnel in sufficiently large numbers (owing to the necessity of keeping at B.C.A.T.P. schools ground personnel who might otherwise have been available for service overseas) meant that the new squadrons had at first to be manned largely by R.A.F. ground crews, into which R.C.A.F. personnel were introduced as they became available. The original plan of 28 R.C.A.F. squadrons, including the three sent from Canada, was extended further and 10 additional squadrons were authorized.

R.C.A.F. Units Are Renumbered

As one of the first steps towards realization of this plan for distinctively Canadian units, a special series of numbers was allotted to the existing R.C.A.F. squadrons and those projected. Thus, on March 1st, 1941, 110 Squadron became 400 R.C.A.F. Squadron; No. 1 Fighter Squadron and the original 112 Army Co-operation Squadron, which since December 9th, 1940, had been known as No. 2 Fighter Squadron, were also given new numbers.

Within a very short time, the new R.C.A.F. squadrons began to take on many of the duties of regular line units of the R.A.F. Spitfire squadrons joined the two Hurricane units already in Fighter Command; night fighter squadrons became operational on Beaufighters and Defiants; Wellington and Hampden squadrons formed in Bomber Command, and Blenheim, Hudson, Catalina and Hampden squadrons in Coastal Command. Due to the fact that the progress of the war had denied to the army in the United Kingdom any opportunities for combat, it became desirable to find other employment 'for the army co-operation squadrons-if only to vary the endless repetition of training and give pilots the satisfaction of operating occasionally over enemy territory. These squadrons, therefore, while retaining the name of "army co-operation", exchanged their slow-flying two-seater Lysanders for the speedy single-seater Tomahawks and were given widely different tasks. So by the end of 1941 R.C.A.F. overseas squadrons formed a versatile, well-balanced organization sharing in the work of all four R.A.F. operational commands.

Many of the new squadrons were at first Canadian in name rather than fact. The day fighter squadrons, as a rule, began with a much higher percentage of R.C.A.F. flying personnel than did the bomber, coastal and night fighter units, but, in all, the ground crews were, in the early stages at least, predominantly R.A.F. Also since the Canadian service did not have sufficient senior officers of recent opera-

tional experience, the original commanding officers of the new squadrons were in most instances appointed from the R.A.F. Whenever possible, however, a Canadian veteran in that force was selected for the post. As rapidly as possible the squadrons have been and are being Canadianized. Despite the difficulties inherent in providing trained ground crews for overseas, while at the same time keeping the B.C.A.T.P. fully manned, more and more R.C.A.F. ground personnel are crossing the Atlantic and the percentages of both R.C.A.F. air and ground personnel show a steady upward trend.

CHAPTER IV

THE AIR OFFENSIVE OVER NORTHERN FRANCE

AFTER its strenuous two months fighting during the Battle of Britain, No. 1 Fighter Squadron had moved first to a station in southern Scotland and then, in December, to another base in the northernmost part of the Kingdom. From the snowdrifts, isolation and boredom of a Scottish winter they returned to England in February 1941 and joined No. 2 Squadron, and both shortly thereafter took on their new nomenclature. During the next few months both squadrons flew their Hurricanes on patrol over convoys along the east coast of Britain, scrambled time and again after reported raiders but actually had few encounters with the enemy. On April 15th, twelve aircraft of the old No. 2 Squadron were the first R.C.A.F. units to engage in an offensive operation over enemy territory when they took part in a fighter sweep over the French coast at Boulogne. This sweep was a wing formation led by McGregor, now a S/L, and some of the squadrons in the group had a brief encounter with the enemy, but none came within range of the Canadians' guns. More sweeps, and other operations consisting of large formations of fighter aircraft, with or without bombers, followed but it was not until August, almost a year after the first Canadian squadron began operations, that R.C.A.F. fighters were again heavily engaged in combat.

That year of inactivity on the part of the Canadians had seen significant changes in Fighter Command, in which the R.C.A.F. had played a part. The most important was the change from defensive tactics to offensive operations.

From the spring of 1940 until the close of the year the work of R.A.F. fighter squadrons had been, primarily, to strike down the bombers of the Luftwaffe and their Messerschmitt escorts; first over the battlefields of the Netherlands, Belgium and France, then over the North Sea and English Channel and finally over the countryside and homes of Britain.

After the death-dealing blows to its Junkers, Heinkels and Dorniers in August and September 1940, the German Air Force had, perforce, abandoned large-scale daylight raids against the United Kingdom in favour of offensive sweeps by high-flying Me. 109s and 110s. But these, too, got short shrift from the Spitfires and Hurricanes and, considering the cost in men and machines, accomplished little. The offensive power of the G.A.F. had not been destroyed but it had received a decided setback and, to say the least, had been blunted.

Offensive Operations Over France

All of which led up to the day of days—December 20th, 1940—the day when, for the first time since Dunkirk, aircraft of Fighter Command carried out *offensive* operations over northern France. On that day two Spitfires of an R.A.F. squadron, one of which was flown by a Canadian, F/L G. P. Christie, D.F.C. and Bar, (since killed on active service) made a low-level attack on Le Touquet aerodrome. Three weeks later, on January 9th, fighter squadrons of 11 Group swept across the Channel in formation, bringing the war home to the Nazis and challenging the best they could muster. And on the day following, six Blenheim bombers escorted by five squadrons of fighters attacked the aerodrome at Guines, a few miles south of Calais. One of the

squadrons taking part in this foray was led by a Canadian officer of the R.A.F., S/L R. A. Barton, D.F.C.

Since then, and particularly since early June 1941, when Hitler's ill-advised and ill-fated Russian campaign began, the tide has been flowing stronger and stronger. Ever larger formations of fighters and bombers sweep south and east across the Channel to the coast of France, strike inland with lightning rapidity at some chosen target—a factory, a railroad junction, an aerodrome or perhaps a power station—and then, tier above tier, roar back across the Channel to the white cliffs of England. Or low-flying fighters, just skimming the deck as they cross the narrow waters at zero feet, sweep in over the coasts of France and the Low Countries, catch the Nazis unaware, spray barges and freight trains, flak posts and soldiers at drill, with their cannon and machine-guns, then turn tail and skitter back over the waves, filled with the glee of a job well done.

By this daily offensive campaign the R.A.F., aided and abetted by the R.C.A.F., has compelled the G.A.F. to maintain in western Europe large numbers of fighters which could otherwise be used to support the Wehrmacht on the eastern and other fronts. It is estimated that a third of the Luftwaffe's fighter strength has thus been immobilized in the west; to say nothing of large numbers of anti-aircraft batteries, searchlight units, wireless stations and all the personnel required to man them. It is significant, too, that the Germans first used their newest and best single seater fighter, the Focke-Wulf 190, in the Pas de Calais, their "front line" of the west.

By challenging the Nazis to come up and fight over their own aerodromes, the pilots of Fighter Command have sought to destroy the enemy in combat and further weaken their fighter force by the wear and tear resulting from constant scrambles and standing patrols. A positive objective of the campaign has been to disrupt, by repeated attacks, enemy industry, transportation and communications in the

occupied countries. But by far the most important feature is the fact that the R.A.F. is now on the offensive; we hold the initiative as day after day we strike at the foe, defy him in his own sky, and, metaphorically, thumb our noses at him over his own air bases. Once again history repeats and, just as in the last war, the Luftwaffe, after early successes, finds itself forced back on the defensive—fighting a losing battle against an opponent whom it had set out so confidently to destroy but who now, with inexorably growing strength, has turned the tables and is girding for the final knockout blow.

Fighter Command Tactics

Fighter Command varies its tactics in this offensive warfare and bedevils the invaders with attacks at different levels, utilizing widely different methods. There are the anti-shipping patrols, or strikes, aimed at enemy vessels along the Belgian-Dutch coasts which are excellent targets for a well-placed bomb or a well-directed cannon. There are also low-flying attacks against coastal targets by pilots working in pairs, or by squadrons or wings operating *en masse* at varying heights and blanketing the sky, not to mention the sweeps by wings or squadrons, which are carried out on every day that weather permits and consist of a great mass of planes that range over the Pas de Calais trying to draw the enemy into the air to test his skill with our Spitfires.

But the most important of all fighter operations carried out are the escorted day bomber raids. An attacking force of bombers¹—six, twelve, eighteen or more depending upon the

¹ During 1941 Blenheims were usually employed, although Stirlings and Hampdens were used on a few occasions. In the early months of 1942 Bostons replaced the Blenheims for this type of work and in August 1942 American Flying Fortresses were introduced. Later, in 1943, Venturas, Mitchells and Marauders joined in the daylight air offensive.

importance of the target—is escorted by fighters, comprising several large formations of three or four squadrons each, arranged in wings. One wing keeps close contact with the bombers throughout the whole operation, while above the main group the escorting squadrons fly layer upon layer. One or two of the wings may be detailed to establish air superiority over the target before the main force arrives. Others may be utilized to draw off the fighters to another sector and clear the way for the advancing bombers by means of a diversionary raid, while still others may be assigned to patrol inland and over the French coast to cover the withdrawal of the whole force. The success of such an operation, involving, as it frequently does, 250 or more aircraft, taking off from many different stations, requires the most careful planning between the Commands and units concerned. A nice appreciation of time and height and an exact adherence to orders on the part of all concerned is required to ensure rendezvous at the correct place, time and altitude and the maintenance of arranged position throughout the sortie.

To counter these attacks upon vital factories and communication centres, the Luftwaffe in occupied France, unable as a rule to meet so large a force with equal numbers, relies upon harrying tactics, using its resources frugally. Groups of its fighters endeavour to gain a position high above our formations and if possible in the sun. There they await an opportunity to dart down in a screaming dive upon an unwary section or even a single aircraft, hoping to get in an effective burst and relying on the momentum of their dive to carry them out of range before our fighters can engage. By these tactics the Germans hope to scatter the Spitfires so that they may be picked off individually or lured down where ground defences can also engage them. In the last war pilots soon learned that success—and life—depended upon observance of three cardinal principles: “Beware of the Hun in the sun!”; “Always keep formation!”; “Never let a Hun get above you!”. These old rules still hold good.

Frequently these operations are completed without encountering the enemy, or at best with only fleeting glimpses; but on other occasions there is a spirited running fight from the coast to the target and back-and often right to the English shore. As a rule the fighter sweeps are much less heavily engaged than the escorted bomber raids, as the enemy dare not let the bombers proceed to their objective with their cargo of high explosives without as much opposition as possible. Thus the bombers serve a two-fold purpose-not only to destroy enemy installations but also to goad him into action against our fighters. For unless the Nazi fighters are airborne and try their luck against our men, we have more to lose than to gain, as their anti-aircraft fire is usually intense and abominably accurate.

One feature of these large forays, which is scarcely conceivable to the layman, is that one wing may be heavily engaged by fighters while the others see no sign of enemy aircraft. Since the formation flies as a huge spearhead, probably three or more miles in depth and many more in width and length, it is not surprising that in this vast space a severe action which involves one portion of the raid is either unnoticed or even invisible to another. In the lead comes the vanguard, clearing the air for the main battle line of bombers and their escort wings. Behind them are their support wings-the rearguard-and far off to the flanks there may be-and probably are-other wings making diversionary sweeps to draw off the enemy and leave the main force an uninterrupted way to their objective.

In these large operations, R.C.A.F. fighter units have had a part for well over two years. Frequently three or more of our squadrons are engaged on the same operation and two or more such expeditions may be undertaken by each unit in a single day.

Bomber Escorts

During May, June and July, 1941, R.C.A.F. fighters

took part in many bomber escort operations, flying through the intense barrage of flak which is the Nazi's customary noisy welcome to such sorties. They had some fleeting encounters with Messerschmitts but it was not until August 19th that the Canadian pilots were heavily engaged and fought their most successful battles in a year. On that day, six Blenheim bombers, escorted by 15 squadrons of fighters, set out to attack the power station at Gosnay, near Bethune, a target which had been the objective of several previous expeditions. Twelve Spitfires of an R.C.A.F. squadron were in support, flying at 28,000 feet. Over the bombers a thick wall of black cloud extending up to 20,000 feet prevented bombing but the escort was heavily engaged by enemy aircraft and fought many combats. Between Poperinghe and Cassel the Canadian pilots saw some 15 Me. 109Fs flying in loose formation below them and made a surprise attack out of the sun. S/L B. G. Morris, R.A.F. commander of the R.C.A.F. squadron and that day the leader of Red section, shot down a Me. in a cloud of smoke and then finished his ammunition on a second which also dived away smoking. In addition the other pilots of Red section, P/Os C. P. J. Wood and D. G. E. Ball (who two years later was to command one of the R.C.A.F. fighter units) each shot down an enemy, one probably destroyed and the other on fire. P/O N. R.

D. Dick destroyed two more of the enemy before he was forced to bale out over the Channel, and was picked up by the Air-Sea Rescue Service. The Canadians' full score for this engagement was: Ball-one Me. 109F destroyed; Wood-one probably destroyed; Morris (who has since been taken prisoner)-one destroyed and one damaged; while Dick destroyed two. Dick's combat report on the engagement may be of interest:

When at 26,000 feet north of St. Omer I sighted 15/20 enemy aircraft heading N/W below at 15,000 feet and squadron commander ordered us to attack.

Whilst diving I saw an Me. 109F attacking Yellow 3 from behind and fired a 2-second burst at 400 yards range, but missed and enemy aircraft took evasive action by half rolling to port.... I then saw 3 Me. 109Fs in line abreast above flying east at 26,000 feet. I fired a 7-second burst from 250 yards range at centre one and thick black smoke poured from its belly.

I saw tracers strike cockpit and fuselage; a further 2-second burst was then given at 75 yards range and enemy aircraft blew up and spun down vertically in flames. The other two enemy aircraft then dived away towards the south.... When approaching the coast near Gravelines I saw a Spitfire at 1,000 feet above me at approximately 18,000 feet being attacked from rear quarter starboard side by one Me. 109F.

I pulled my nose up and fired a 4-second burst into his belly at 150 yards range. Shortly after, black smoke and flames came from his belly and he was last seen diving to starboard with flames coming from his belly. I then saw another enemy aircraft below at 15,000 feet and used up the rest of my ammunition with a z-second burst at 350 yards range, but did not see result, although I think I hit his tail. During this time I was attacked on port and starboard side by two enemy aircraft. My starboard wing tip was struck by 3 cannon shell and broke off. The port wing was also hit by cannon. On making a left hand turn I found a cannon shell had struck base of control column, rendering my right aileron useless and being unable to straighten out I used heavy right rudder to pull her up.

When at 6,000 feet I see-sawed for cloud cover and was again attacked from astern; the radiator panel was hit and also my reflector sight and cockpit filled with white smoke.

I yanked emergency cockpit cover, which blew off On my port side I saw another Me. 109F. 1,000 yards away about to attack. I went down in a slow left hand dive and lost 3,000 feet. As I recovered from dive, I saw enemy aircraft turn for France.

I levelled out and found engine failing, so I used hand pump and injected fuel to keep going. When 2,500 feet over Channel I found myself losing control and on sighting cliffs of Dover I realized I could not make land, and jettisoned my helmet. From 2,500 2,000 feet I called Mayday on button D and at 1,800 feet baled out clear from port side of aircraft. My parachute opened easily.

While floating down I inflated my Mae West. On the way down I lost one flying boot and my revolver. As my feet touched the water, I tried to release parachute, but I missed hitting the release.

I was dragged 3/4 feet below the surface and then managed to release myself.

I pulled the dinghy towards me and partially inflated it by giving it

one full turn, then being exhausted I hung on to dinghy and when on top of a high wave I saw 6/7 Spitfires orbiting above me and also Rescue Boat approaching, which reached me about 10 minutes later.

The Canadians are Bounced

But all engagements did not end so favourably, and sometimes our squadrons found themselves on the receiving end with heavy losses and few successes to compensate. For instance, on October 27th, one R.C.A.F. squadron, while winged with two R.A.F. units, was making a sweep over the Franco-Belgian coast from Nieuport to Gravelines, when they ran into most unusual enemy activity. As they reached the limit of their inland penetration north of Poperinghe, several Me. 109s bounced Blue section of the Canadians, shot down two of the Spitfires and continued their screaming dive through the formation to safety below. They were followed by Blue leader, who fired two bursts at a Messerschmitt and sent it down with smoke pouring out of the fuselage, before he began the laborious climb back up to the main formation. As the wing approached the coast again near Mardyck, Red section, having benefitted little from the object lesson of Blue, were attacked in exactly the same manner and two more of our Spitfires fell victim to lack of watchfulness. The third member of Red, attacked by several Messerschmitts, damaged two, one of which was probably destroyed, but his own aircraft was so badly shot up that he had to crash-land in Kent. A fifth member of the squadron failed to return from this disastrous expedition and still another Spitfire was so damaged that the pilot had to bale out after reaching the English coast.

And the Canadians' period of tribulation was not at an end, for early in November they suffered another severe setback. An R.C.A.F. unit, again while in formation with two R.A.F. squadrons, ran into considerable enemy fighter opposition when making a Hurri-bomber (the old Hurricanes fitted with bombs) attack on a distillery at St. Pol, northwest of Arras. The Hurri-bombers did their work most

effectively and the still tower was seen to disintegrate, while the rest of the distillery was a mass of smoke and flying debris. The wing of which the Canadians formed a part had been late in getting away from the rendezvous and when it arrived over Hesdin, west of St. Pol, large numbers of Mes., which had been waiting in the sun, bounced the top squadrons and continued their attack in a running fight all the way back to the coast. The Canadians lost two pilots and the R.A.F. squadrons three more.

However, instances such as these are, fortunately, comparatively rare and the struggle is by no means one-sided. The Nazis have certain advantages in these operations; they are fighting over their own territory and if their aircraft are damaged and forced to land they may be repaired quickly and in all probability are in action again without delay. We, on the other hand, have lost many pilots and aircraft because, although the damage may have been comparatively slight, the plane could not regain the friendly shores of the British Isles. Similarly, if a Hun has to bale out of his burning kite he may be flying a few hours later; while our pilot, in like circumstances, becomes a prisoner of war. Again our pilots, operating as they are many miles from base, must watch their gasoline consumption and ammunition expenditure. For the Nazis, these conditions are not of such great moment and, indeed, in many cases they have withheld their attack until such time as our machines were on the homeward trip and consequently hampered by a limited and rapidly diminishing supply of fuel. Finally it should not be overlooked that our pilots have to face a heavy barrage of flak, which has sometimes caused heavy casualties in our ranks. We have had to pay a price, frequently heavy, for the successes we have achieved in forcing the enemy to engage; but we have made the Luftwaffe pay a price too—a price which, considered in relation to the size of that force, has been many times heavier than ours. And we are still carrying the war to the very heart of the enemy.

The FW. 190 Comes Into Service

During September 1941 a new radial-engined fighter began to appear in the Pas de Calais; this was the Focke-Wulf 190, which gradually superseded the Me. 109 as the first-line fighter of the G.A.F. Our pilots studied its performance with zeal and soon demonstrated that while the FW. had a good show of speed and could climb and dive amazingly, the Spitfire could out-turn and generally out-maneuvre it in combat.

September 1941 was a most active and outstandingly successful month for R.C.A.F. fighter units and ended in a co-ordinated dual offensive on the 27th. Two fighter-bomber sweeps struck simultaneously at the railway yards at Amiens and at the power station at Mazingarbe, north-west of Lens. Two R.C.A.F. squadrons formed part of the escorting wing for the 11 Blenheims aimed at Mazingarbe, while two others were in the support wing which patrolled the coast to cover the withdrawal of both formations. All four squadrons were engaged by the enemy.

The Mazingarbe party encountered strong fighter opposition from the moment it crossed the French coast. Large numbers of Mes. were waiting up sun for the approach of our formations and, throughout the whole operation, small detachments of the enemy kept up harassing attacks from the coast to the target area and back to the coast again, even continuing their efforts well out into the Channel. But all the Blenheims returned and the Spitfires and Hurricanes took a heavy toll of the enemy, when F/O F. W. Kelly and Sgt. George McClusky shared a Me. 109F damaged; Corbett (by now a S/L) and McClusky shared the destruction of another, while F/L H. F. Crease and P/O L. S. Ford shared in a damaged Me. 109. Both Ford and Kelly have since commanded R.C.A.F. fighter units. F/L R. B. Newton (also later an R.C.A.F. fighter C.O.), Ball and Sgt. E. A. Crist each destroyed a Me. 109, while F/L R. G. Clouston damaged another. From this engagement S/L R. A. Lee-Knight,

the R.A.F. commanding officer of one of the squadrons and S. A. Graham, a pilot officer of another, failed to return. In addition, another R.C.A.F. squadron drew their first blood in this encounter, when F/L K. A. Boomer and P/O R. W. McNair each damaged a Messerschmitt.

October saw less action for the Canadians, but one or two incidents are worthy of note. One of our formations had completed an uneventful patrol over the French coast and had turned for home when McNair broke away to investigate a report that several Messerschmitts were over Boulogne. He found seven circling at a low altitude around a pilot floating in the sea and, regardless of the odds, attacked them. After his second burst, one Me. dived straight into the Channel. McNair (Buck to most of the R.C.A.F.) then headed for home, calling his ground station to give them a fix on the airman down in the sea. But another Me. dived on him out of the sun, hit his engine with the first burst and then got on his tail and scored further hits. Smoke began to fill the cockpit of his Spitfire but McNair fought on and when the enemy overshot its mark and passed over him, the Canadian pulled up his nose long enough to fire a burst from his starboard guns (the others were already out of action). Hits were seen on the Me. and the cockpit cover flew off. But by this time flames were enveloping McNair's own machine and his engine was coughing. He climbed to 400 feet and then baled out. Releasing his parachute just as he hit the water and inflating his dinghy, he floated around for 15 minutes before being picked up by the air-sea rescue people and landed on friendly shores.

McNair was later posted to Malta, where he destroyed four more enemies and damaged others, once damaging four in a single combat. In May 1942 he was awarded the D.F.C. and later returned to Britain to the R.C.A.F. squadron with which he had formerly served and added several more victories to his already impressive total.

Sgt. E. N. Macdonell, a pilot of one of the new fighter

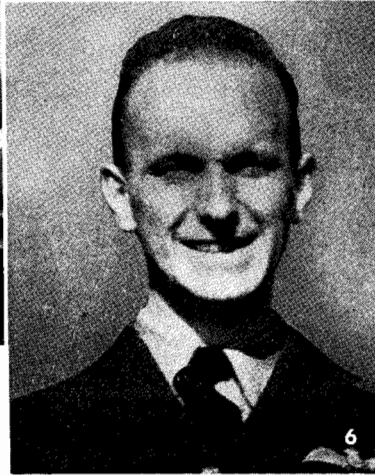
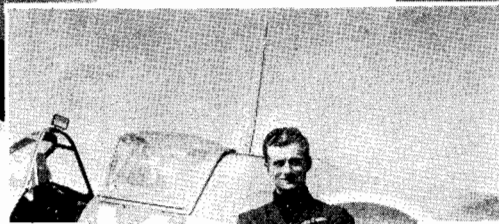
squadrons, on October 13th was credited with his unit's first decisive victory when, in combat off Boulogne, he dived out of the sun on two Me. 109Es. Opening fire at 250 yards he saw his tracers strike around the cockpit and the enemy dived straight down, taking no evasive action whatsoever-the pilot had probably been killed with the first burst. Macdonell followed his victim down to 2,000 feet, firing short bursts, and then attempted to pull out, but he blacked out and when his vision cleared he was only 400 feet above the sea with the enemy nowhere in sight. His wing commander passed over the area just at that time and observed an oil slick where the Me. had plunged in. Macdonell was commissioned during the following week but shortly afterwards was "missing after enemy operations".

On November 22nd, the R.C.A.F. had another most successful day during an offensive sweep over the Calais country. Near St. Omer, some 20 Me. 109s and FW. 190s were encountered and many combats resulted. Sgt. J. A. O. Levesque destroyed one of the new Hun machines after fighting it from 15,000 down to 5,000 feet, and thereby scored the first R.C.A.F. success over the Focke-Wulf. As he was flying back to the coast, Levesque met a second FW. near Desvres, attacked and probably destroyed it, but a third dived on him before he could verify the outcome of his attack. Evading the new enemy, Levesque returned to his base. Sgt. D. R. Morrison, of the same squadron, also damaged one of the new fighters, which went down with heavy black smoke pouring from its vitals, and later destroyed a second which was attempting to attack another Canadian Spitfire over the Channel. Other pilots of the squadron had also engaged the enemy; P/O Ian Ormston crashed a Me. in a field and P/O D. J. M. Blakeslee sent one down in flames, after which he encountered two more Mes. on the way home, engaged them over the Channel, and damaged one. In addition S/L N. R. Johnstone and P/O G. W. Northcott each damaged a Me. during this sortie. P/O

H. A. Sprague was the only Canadian casualty and confirmation was later received that he had been taken prisoner. All in all, November was an outstanding month for the Canadians. In addition to those destroyed in the larger engagements, S/L A. G. Douglas damaged a Do. 217 on the 4th; Boomer destroyed a Ju. 88 on the 7th; F/L C. T. Cantrell damaged a Me. 109 on the 8th, Clouston a Do. 17Z on the 11th and Newton a Do. 215 on the 25th. Another squadron probably destroyed three Me. 109Fs and damaged a fourth on the 18th.

German Warships Escape

November's activities had been favoured by unusually fine weather, but December, January and February brought the customary sequence of bad flying conditions, with resultant restriction of Fighter Command's operations. However, one event of major importance did occur: the passage of three German warships up the Channel from Brest. Shortly after 1000 hours on the morning of February 13th, 1942, two R.A.F. Spitfires patrolling the Channel over Cap Gris Nez sighted two Me. 109s and set out in swift pursuit. Before overtaking the fleeing Mes. the British pilots spotted a large force of naval vessels just off the French coast between Berck and Le Touquet; among these there were two battle cruisers, a heavy cruiser, three destroyers and twelve E-boats. Breaking off their pursuit of the Mes. they sped home with the news-and soon the R.A.F. and the Fleet Air Arm were in desperate action. Between noon and 1800 hours, Fighter Command despatched over 400 fighters to co-operate in attacking the target. The majority of the 400 were detailed to escort the bombers and torpedo-carrying aircraft of Bomber and Coastal Commands and the Fleet Air Arm, or to provide protection while the bombers closed in on the vessels. In addition, several squadrons of Hurricanes and Spitfires made attacks on the enemy E-boats and destroyers. But weather conditions were difficult, with



1. FS H. L. Gill, D.F.M. 2. F/L G. B. Murray, D.F.C. 3. W/C C. J. Fee, D.F.C.
4. W/C A. D. Nesbitt, D.F.C. 5. F/L J. Whitham, D.F.C. 6. S/L E. L. Neal,
D.F.C.



ABOVE: Sgt. Norman Houghton, F/L R. A. Buckham, D.F.C., F/L J. A. Rae, D.F.C.
BELOW: F/O L. W. (Pip) Powell, D.F.C., LAC W. Couatts.

complete overcast at 5,000 feet, while below that, from 2,500 to 1,500 feet, there was considerable broken cloud. Under these conditions the difficulty of the escorting fighters in keeping, or even making in the first instance, contact with their charges, was almost insurmountable. And even worse was the difficulty for the bombers either of locating their target, or, if they did find the ships, of observing the effect of their bombs. Aircrews who succeeded in locating the enemy reported that the battleships, cruiser and attendant destroyers and E-boats put up an almost impenetrable curtain of flak, which made low level beam attacks nothing short of suicidal. Enemy fighters patrolling in packs of forty or more over the convoy and between them and the coast, in an endeavour to lure our aircraft within range of the shore ground defences, did little to make the lot of our pilots more bearable.

R.C.A.F. fighters, who made six squadron sorties during the running fight, engaged in a number of these actions, in the course of which Ormston shot down one Me. 109 in flames and aided P/O A. E. Harley and Morrison in the destruction of another; Northcott and Flight Sergeant H. D. MacDonald shared the credit for damaging two, while Flight Sergeant G. A. J. Ryckman was credited with the destruction of one as well as sharing with Crist in the damage of another. P/O Levesque, who as a sergeant has already been mentioned, was lost in the engagement.

March saw the entry of another period of intense activity, with the power stations at Comines and Ostend and the freight yards at Abbeville and Hazebrouck among the objectives. In most of these sorties the R.C.A.F. squadrons formed part of the fighter escort. The A.O.C.-in-C., Bomber Command thanked one R.C.A.F. squadron for its contribution to the "efficient and complete cover" afforded the bombing Bostons on one operation. A second fighter unit, during the same month, while flying in close escort to a formation of Bostons, beat off repeated attacks of FWs.

and Mes. which attempted to break through to the bombers. During this engagement, which took place on the 27th without loss to either the bombers or their escorts, P/O F. E. Green destroyed one enemy, while P/Os John Long and D. W. P. Connelly were each credited with a probable. And two days later Ian Ormston was credited with the probable destruction of another FW.

Large-Scale Operations Introduced

The improved weather in April allowed Fighter Command to increase the tempo and scale of attacks on the enemy in northeastern France and Belgium, and five, six or seven large-scale operations took place almost every day, rising to a high of nine on the last day of the month. On three occasions during the month, these operations involved more than 1,000 of our aircraft and on three other days the number was not far below that mark.

On the 15th, Canadian fighter squadrons were involved with the enemy when they took part in three of the day's five offensive patrols and fought two hotly contested engagements. During one of these, an attack by Hurri-bombers on the aerodrome at Desvres, three R.C.A.F. units were among the covering fighter force. One of the three was heavily engaged by Mes. and FWs. but drove them off without loss. In the early evening, another squadron had a dogfight with fifteen enemy fighters and again had the better of the foe. One of the pilots, Flight Sergeant E. B. Argue, diving 10,000 feet after an FW. which he is credited with having probably destroyed, reported that his airspeed indicator registered 450 m.p.h. during the dive. Ted Argue, who was reported missing about ten days later, was a most popular member of his squadron and a somewhat irrepressible pilot. After spending many months as a prisoner, Argue was recently repatriated to Canada.

The following day, April 16th, also saw the Canadians involved in heavy action during a fighter sweep between Le

Touquet and Sangatte, when Neal, Ormston, Blakeslee and P/O J. Whitham were all credited with damaging FW. 190s.

For more than half the month of May the weather caused a reduction or even complete cancellation of most of Fighter Command's offensive operations. Whenever possible, however, our patrols and formations swept across the Channel and in over the French coast to harass the enemy air and ground forces, fighting the Nazis in their own sky, attacking them in their own front yard. There were numerous engagements involving Canadians, but no outstanding actions.

Early June was featured by low-flying beat-ups carried out by one R.C.A.F. squadron. One morning while on a diversionary sweep the pilots of this unit dived down to ground level and attacked trains between Etaples and Le Touquet, during which two trains were forced to stop and a third damaged. They also shot up and set fire to a wireless station on the coast near Ault. Encouraged by this success the squadron returned the following day and repeated their ground strafe, damaging two factories and a flak post. While flying on this raid, E. L. Neal, now a flight lieutenant, saw a twin-engined communications monoplane flying toward Dieppe and in company with his number two man, Flight Sergeant S. C. Cosburn, attacked it, set it on fire and saw it crash in a near-by field. It was later learned that the pilot of the plane was Oberstleutnant Hahn, a prominent German airman who had with him a staff officer and a wireless operator-all three being killed.

Flight Sergeant D. R. Morrison won the Distinguished Flying Medal during another sweep on June 6th, when he assisted W/C J. Rankin, D.S.O., D.F.C., in destroying a FW. 190 during a heated engagement over Abbeville in which several more of the enemy were damaged. Morrison had previously destroyed two aircraft, shared a third with two other pilots, "probably destroyed" one and received credit for damaging four others.

Poor flying weather again conspired against the R.C.A.F. fighter pilots adding further scalps to their belts during the latter part of June and early July, and a full flying schedule was possible on only a few days. For the rest, the met. reports (meteorological, to those who are not in the Air Force) read "unsuitable", "adverse", or "unfavourable".

Large-Scale Low-Level Operations

On the 15th of the month (July) Fighter Command introduced a new type of offensive operation, when the low level attacks which up to this time had been conducted by two, or at the most four, pilots, became large scale operations carried out by wing formations. One of these was carried out by fifteen Spitfire squadrons against targets near St. Valery, Dieppe and Etaples. The pilots turned their cannon and Browning guns on wireless stations, camp huts, army tents, flak positions, machine-gun posts, groups of officers and soldiers, freight cars, a train and a factory. Intense flak was encountered but only three planes from the whole formation were lost.

On the 20th and 21st, further mass low-level attacks were carried out against the areas between Cayeux and Le Havre and between Blankenberghe and Dunkirk. During the first of these, one squadron attacked targets near Ault, including a freight train, a factory, a gun post and a guard ship.

The aim of the daylight offensive operations was always to draw the German fighters into the air where they could be engaged and destroyed. On the 26th two formations of Spitfires crossed the Channel to circle two aerodromes at St. Omer-Fort Rouge and Abbeville-Drucat, and engage the enemy fighters as they took off. R.C.A.F. squadrons took part in both these operations and in each had numerous encounters with the Hun.

In the operations near Abbeville, F. E. Green, now a flight lieutenant, led his section in an attack on a group of

FWs. flying at about 500 feet. During this encounter Green shot one down, while Whitham, also recently promoted F/L, and Morrison (now a P/O) each damaged another. In the same foray, F/O G. G. Davidson probably destroyed one, while P/O K. I. Robb damaged another. An American officer, L. C. Clark, one of three attached to the squadron for operational experience, was lost on this attack.

Throughout the first half of August, Fighter Command's activities were again on a reduced scale and defensive actions were more prominent than offensive. R.C.A.F. pilots fought several combats with FW. hit-and-run raiders and with bombers which attempted sneak raids under low-hanging clouds, but no particularly notable engagements took place.

The Combined Operations at Dieppe

But on the night of August 18th the pilots of many R.C.A.F. and R.A.F. squadrons were briefed for the great combined operation which was set to take place on the following morning. The Battle of Dieppe was about to begin. "Here it is at last," was the common thought of air and ground crews throughout the force.

The action at Dieppe marked the largest-scale operation to date by co-ordinated forces of the Navy, Army and Air Force against the defences of enemy-occupied Europe. It provided the first test of the importance of air power to such an undertaking and of the extent to which aircraft might be utilized in any projected cross Channel assault upon the Continent.

Briefly, the objectives of the operation were two:

- (a) To test German defences;
- (b) To lure as many German aircraft as possible into the air.

The tasks allotted the air units were:

- (a) To provide air cover for the Navy and Army. This was supplied largely by fighter aircraft;
- (b) To attack coast defence batteries in the area and for-

tified headlands on the flanks-carried out by medium and fighter bombers;

(c) To lay a smoke screen to cover the advancing and retiring forces-intruder aircraft;

(d) To carry out tactical reconnaissance within the area and in the immediate neighbourhood of the point of assault-army co-operation aircraft;

(e) To detect unusual enemy ship movements preceding the attack-Coastal Command aircraft.

The operation may be divided roughly into five phases:

(a) The outward passage and landings;

(b) The assault on the shore objectives;

(c) The withdrawal to the beaches;

(d) The embarkation;

(e) The return passage.

The work of the different types of aircraft in each of the five phases is discussed in the appropriate chapters.

At dawn on the 19th, the pilots were standing at readiness and shortly afterwards the first fighter patrols were airborne to cover the landings. From that moment onwards a continuous cover was maintained by squadrons working in relays until the ground forces had withdrawn and were safely across the Channel again. The scale of Fighter Command's operations that day far surpassed anything previously attempted-greater even than the climax of the Battle of Britain.

During the first phase of the operation, which took place from 0455 to 0550 hours, the Air Force laid smoke screens, attacked enemy defences and positions on the coast and gave air cover to the troops. There was relatively little enemy activity in the air and Canadian squadrons had no part in this preliminary phase.

During the second phase, from 0550 to 0730, enemy fighter opposition in the air increased and the Canadians fought sharp but indecisive actions with FW. 190s.

In the third phase, when progress on the right of the

landing was seen to be satisfactory but Canadian troops and tanks in the centre were being held up, enemy air activity increased materially, and reached a peak about ten o'clock with the appearance of Nazi bombers who concentrated their attacks on our naval vessels and landing craft lying off shore. The fighting was heavy during this period and the enemy lost many bombers. One R.C.A.F. squadron destroyed two bombers but lost three of their own pilots; another destroyed one and lost two in a combat in which they were outnumbered three to one.

At ten minutes to eleven, re-embarkation was scheduled to commence. From then until the convoy had cleared the French coast and was well across the Channel on the return voyage, our fighters continued to cover the ships against bomber and fighterbomber attacks, while other formations of Hurricanes, Blenheims and Bostons bombed enemy gun positions and laid another protective smoke screen. To hamper enemy operations during this critical period a heavy diversionary raid was made on the Luftwaffe aerodrome at Abbeville-Drucat by a force of 24 American Flying Fortresses escorted by a wing of Spitfires which included R.C.A.F. squadrons. The Fortresses once again did extremely accurate bombing despite heavy flak which burst close to their aircraft; direct hits by bombs were observed on dispersal areas, runways and flak positions. Aerodrome facilities received a severe hammering and the field was put out of action for several hours.

After completing their escort duties during this attack, one of the R.C.A.F. squadrons turned off towards Dieppe to join in the action there, during which S/L K. L. B. Hodson and his pilots intercepted four Dors. on their way to bomb our ships and drove them off damaged. Morrison destroyed a FW. 190 but his own aircraft was damaged by pieces flying from the enemy plane and he was forced to bale out into the Channel, from which he was later picked up by a rescue boat. In other engagements over the convoy our

fighters picked off two more FWs. when L. S. Ford (now a S/L) and F/L G. U. Hill each destroyed one and their formation damaged several others.

During the return of the combined forces S/L Lloyd V. Chadburn's formation was very heavily engaged and fought a brilliant action without loss. As the Spitfires were approaching the convoy to commence their patrol a formation of from twelve to fifteen FWs. dived on them from the rear. Chadburn brought his squadron round in a tight turn on the tails of the attackers and reversed the tables so effectively that three of the FWs. were destroyed. Hurriedly reforming, Chadburn and his pilots resumed their protective patrol and saw seven Ju. 88s approaching the convoy. Flying in to attack the Nazis head-on, the Canadians succeeded in driving off the whole formation, damaging at least six. Again the Spitfires reformed as a large group of FWs. appeared several thousand feet above but did not attack. But Chadburn's pilots were not finished yet, as one section engaged a formation of Me. 110s and drove them off, after which, their job finished, the Spit pilots flew, home for their first hot meal of the day.

Another squadron, on duty high above the convoy, also saw action during the day and damaged several fighters but lost two of their own. Later patrols saw less action as the convoy approached the English coast, but Ford and P/O H. J. Murphy each destroyed an FW., while Newton chased off a Dornier 217 and forced it to jettison its bombs.

During the day, the following R.C.A.F. pilots accounted for Hun machines, either destroyed, probably destroyed or damaged: Hodson (2); Flight Sergeant R. M. Zobell (1); Cosburn (2); Morrison (1) ; Whitham (2) ; P/O G. B. Murray (5) ; P/O H. A. Westhaver (1); Chadburn (2); F/L H. Russell (1); F/L F. H. Boulton (1) ; P/O R. A. Buckham (2) ; Flight Sergeant R. D. Phillip (1) ; MacDonald (1) ; Murphy (2) ; Hill (2); Ford (2) ; F/L P. T. O'Leary (1) ; Sgt. M. K. Fletcher (1) ; with three unallotted among the

pilots of one squadron and five others unallotted: a total bag for the day of 11 destroyed, 4 probably destroyed, 19 damaged, and 10 "assists" to other squadrons, as against Canadian losses of 9 fighter pilots, three of whom baled out but were later rescued. The fighter pilots lost were: P/O J. N. Brookhouse, who crashed in France and was killed; Sgts. M. Buckley and L. Armstrong and P/Os L. A. Walker, A. Monchier and J. E. Gardiner, all of whom failed to return.

Total enemy casualties that day were assessed at 93 aircraft destroyed, with twice that number of probables or damaged. Allied losses were set at 98 aircraft, the pilots of 30 of which were rescued. But mere figures do not give a correct picture of the destruction caused by our pilots. The losses of the G.A.F., considered in relation to the size of the forces available and involved, were several times higher than those of the R.A.F. Fighter aircraft destroyed-disregarding those claimed as "probably destroyed" or "damaged"-constituted almost a fifth of the estimated fighter strength of the Luftwaffe in the western part of Europe.

Morrison, as has been mentioned before, shot down a FW. 190 and then was forced to bale out. His experiences that day are interesting. Here is his own report:

The Squadron was brought to readiness at first light (05.07) but did nothing until we took off at 09.30 to escort 24 Fortresses which were to bomb Abbeville aerodrome. We made rendezvous with the Fortresses and the other escort squadrons and went straight to Abbeville. The flak was fairly heavy, but caused no trouble. I saw the bombs burst squarely on all the buildings surrounding the aerodrome. The bombers then turned left and headed for home. We encountered no opposition from enemy aircraft. Blue section became separated from the rest of the squadron. Red and Yellow sections then proceeded to Dieppe, losing height to approximately 10,000 feet. I did not have time to pay much attention to what was going on below, but at a glance could see that there was terrific activity on land, on water and in the air. Being chiefly concerned with the aerial side of the battle I saw several FW. 190s fly-

ing singly, but stayed with my section until I saw a single FW. 190 just ahead and about 1,500 feet below me. I did a slipping barrel roll, losing height and levelled out about 150 yards behind and slightly to the starboard and above the enemy aircraft. I opened fire with a 2-second burst closing to 25 yards. I saw strikes all along the starboard side of the fuselage and several pieces which seemed about a foot square flew off from around the cowling. Just as both the enemy aircraft and myself ran into cloud, he exploded with a terrific flash of flame and black smoke. Immediately after this, my windshield and hood were covered with oil and there was a terrific clatter as pieces of debris struck my aircraft. I broke away, hardly being able to see through my hood or windshield. My number 2 (Yellow 4—Flight Sergeant Reesor) said he saw a piece about 10 feet long break off the enemy aircraft. We then rejoined Yellow 1 and 2 and headed for home. I was quite unaware that my own aircraft had been damaged and we were flying at about 1,000 feet. Suddenly my engine started to cough and the aircraft shuddered violently. I realized that I was going to have to bale out so I started to climb, running into a low cloud. My engine cut out completely but I had managed to reach 2,000 feet. I took off my helmet, and undid my straps and opened the hood. I crouched on the seat and then shoved the stick forward. My parachute became caught somehow and I figured I was about 200-250 feet above the water when I got clear. The aircraft plunged into the water below me as my parachute opened. Almost immediately I pressed the quick release, just as I hit the water. I inflated my dinghy without any trouble and then climbed in. Two of the aircraft that were with me kept circling while the third (Yellow iF/L Whitham) went for a rescue boat which was not far away. I put up my flag, which aided the rescue boat to come straight to me. The aircraft of my own squadron being short of petrol left me but another squadron circled me until I was picked up by the rescue boat. I had only been in the water for about 15 minutes. The captain of the boat estimated my position as 17 miles off Dieppe. I was picked up about 1110 hours and immediately got into dry clothes. Unfortunately, I was told that I would have to stay on the boat until it returned to port at night, so that I would miss the rest of the day's fun. During the afternoon we went on several other crash calls without success, often operating within sight of the French coast. We saw the attack by bombers on the convoy beaten off by heavy ack-ack fire. We saw the explosion and pall of smoke caused by two Spitfires colliding head on. We saw gunfire from the shore and from the boats and aircraft laying smoke screens. Later on in the afternoon two FW. 190s passed over us about 5,000 feet. Shortly afterwards, I saw them attack and set on fire another A.S.R. boat. Knowing that we could not do much with our light armament, we raced back towards England to

get the help of a Navy boat which we had previously noticed. As we went back towards the burning launch, we saw another rescue boat trying to give aid to the first one. Suddenly four more FW. 190s appeared and attacked, setting the second launch on fire. Two Spitfires appeared in answer to our calls for help and as one of the pilots circled as close as he could, we indicated the trouble ahead, and they set out. No sooner had they left us than six more FW. 190s dived down to attack us. We escaped serious damage but our radio was put out of action. The trifling fire put up by our own inadequate Lewis guns had not appeared to bother the enemy aircraft in the least, but the fire from the 20 mm. Oerlikon, gun on the Navy boat evidently struck them. About this time, I believe they ran out of ammunition, and they left us. We picked up the survivors of the two burning launches, all of whom were in the water. The two rescue boats were burning furiously and the ammunition aboard was exploding. As we were picking up the survivors, two Spitfires arrived and circled us. We picked up 14 survivors and the Navy boat picked up about four, believe. There should have been 22. The enemy aircraft had also attacked the men as they were in the water. Most of the men picked up were very badly wounded, so we returned to port at full throttle. One of the Spitfires escorted us to within about six miles of Beachy Head, the other staying with the slower Navy boat. On the way home we also saw the convoy attacked and I saw a stick of bombs hit the water, but not within half a mile of any ship. We raced to port where there was an ambulance waiting for us. We unloaded the wounded men and then went ashore ourselves:

Morrison does not mention that while on the rescue launch he leaped overboard to save a badly wounded air-sea rescue man.

CHAPTER V

FIGHTER OPERATIONS AFTER DIEPPE

THE days following Dieppe saw a continuation of Fighter Command's offensive whenever the weather permitted. Late August operations were featured by large-scale raids by American Flying Fortresses accompanied by Spitfire squadrons acting as close escort, with other fighter wings carrying out diversionary sweeps. In each of these expeditions two R.C.A.F. squadrons, flying the latest type of Spitfire, formed part of the bombers' escort, while other Canadian units acted in different capacities on the same raids.

The target of the first attack was Amiens, which was bombed with telling effect. Few enemy aircraft were observed and those that were spotted remained at a respectful distance, which is not to be wondered at, as this raid was staged on the day following Dieppe and it seems probable the Nazis had had sufficient for the time being. One might suppose that pending the arrival, from other theatres, of fighter reinforcements to repair the ravages of the previous day, the Luftwaffe were anxious to husband their resources of both men and machines.

Again on August 24th the Fortresses were out with Spitfires and other fighter escorts, this time to bomb the shipbuilding yards at Le Trait. After the four day lull the fighter opposition was more severe, composed without a

doubt of the pilots rushed up as replacements for the losses at Dieppe-though these were surprisingly aggressive for new men-and several dogfights ensued in the Yvetot area as the formations were withdrawing. One R.C.A.F. squadron led by S/L N. H. Bretz dived from 30,000 feet to engage twelve FWs. they saw climbing beneath them. The fast-moving dogfight which ensued brought an almost indistinguishable melee of FWs. and Spitfires down to 22,000, where the Nazis were joined by about forty more FWs. Despite the odds, the Canadians pressed the attack and Bretz and F/L E. A. Bland each destroyed one of the enemy. P/O N. A. Keene scored a probable and several which were driven down damaged were allotted to the formation. P/ O G. P. MacKay and Sgt. Miller did not return from this engagement and Bland and I. G. Keltie, the two flight commanders, were wounded but managed to reach their base, where the former crash-landed.

August 28th saw another expedition, this time against the aircraft factory at Meaulte, during which enemy fighters again pressed home their attack. They were, however, no more successful than in the last encounter and the Canadians again scored heavily with slight loss to themselves. The Fortresses carried on their good work despite extremely heavy and accurate flak from the Forêt de Crècy and dropped their bombs on the allotted target. One of the Canadian escort squadrons intercepted and drove off an FW. formation, which attempted to break up the Fortresses, while the other R.C.A.F. unit was heavily engaged with a second group of FWs. numbering approximately forty and fought all the way from Amiens to the middle of the Channel before the Nazis broke off. Though no enemy aircraft were seen to crash, P/Os Murray (who was awarded the D.F.C. for his outstanding work), T. K. Ibbotson, and Morrison, and Flight Sergeant L. F. Foster, were all credited with probables, while Flight Sergeants A. L. Sinclair and J. Chapin each damaged one. We suffered the loss of one air-

craft when Whitham did not return, after being last seen engaged with an FW. over Amiens. Whitham had distinguished himself repeatedly in engagements with the enemy and his loss was keenly felt.

The Hurricane Fighter Bombers

High flying engagements were not the only operations carried out by Fighter Command during August. Low level attacks on aerodromes, factories, encampments, wireless stations, flak posts, trains and shipping all received due attention. These attacks had, prior to this time, been carried out by Spitfires working in pairs and sections, but now strong formations of Hurricanes, fitted with bomb racks, were sent out with large forces of protecting fighters. Thus we have an adaptation of the high-level formations to lowlevel work and the appearance of ground strafing. One Canadian squadron was the third unit in Fighter Command to be equipped with Hurri-bombers and under the leadership of Corbett and later S/L R. E. E. Morrow, was used on this work for some months.

As far back as November 1st, 1941, Corbett had led his Hurribombers in operations against the enemy. Crossing the Channel at sea level, they had as their objective on the first raid Bercksur-Mer, and dropped their bombs on a wide assortment of targets. Railway lines, junctions and bridges, freight cars, barges and gun posts alike felt the weight of the Canadians' attacks. Three days later the squadron repeated the performance against the aerodrome at Berck, when they bombed the dispersal huts, hangars and a camouflaged building, which is presumed to have been the station mess. Motor launches and barges on the near-by river also came in for attention.

A week later the Dieppe area was the objective of an attack by the same squadron, and railroad tracks, a bridge, a power station and an electric pylon were all hit by the 250 lb. bombs released by the speeding Hurries. A short time

later the aerodrome at Morlaix was also bombed. Spurred on by their success the squadron took on new objectives and turned their attention to shipping off the Cherbourg peninsula. One particularly notable success was gained in February 1942 when the squadron under Morrow's leadership set off on a dusk patrol with shipping at Ile de Batz as their objective. In all they found five destroyers moving in line astern off Brest and attacked the last ship in the line. Our pilots saw their bombs score direct hits, leaving the vessel badly damaged and down at the stern. It is believed to have sunk later. Several near misses were scored on a second ship. This was carried on despite the most intense flak, but due to their skilful jinking (more politely and officially known as "taking evasive action") our airmen suffered no loss.

Both Corbett and Morrow were decorated with the D.F.C. for their skill and leadership in these attacks and for the fighting spirit which they not only displayed but which they also instilled into their squadrons.

Spitfires as Ground Strafing

Spitfires, too, have joined in this low-level ground strafing—one of the most thrilling of all possible pursuits for the fighter pilot. They also had been first used in this mode of attack in November 1941, when F/Ls C. Bushell and C. T. Cantrill and Sgts. E. N. Macdonell and R. A. Ellis, flying at zero feet, struck across the North Sea to Walcheren Island. They turned north to Scheveningen, where they attacked a wireless station and machine-gunned a lorry.

Boomer also led a group of four Spits on a similar attack on barges, on the Canal de Bourbourg, in the Nieupoort-Furnes area. Crossing the French coast at Dunkirk, they played hide-and-seek among the trees and buildings and made cannon and machine-gun attacks on four large barges and several canal locks. Casualties were inflicted on a group of approximately 100 soldiers in the course of one of

two attacks on flak gun emplacements. As they sped home, still at sea level, they fired cannon bursts at a flak ship and observed several hits on the bridge.

A few weeks later the Spitfires again raided this area, sweeping along the coast from Dunkirk to Ostend and attacking targets near Braydunes and Coxyde, with both cannon and machine-gun. On this expedition one section damaged a freight train and an oil tank while the second shot up a string of barges. In another similar foray, two R.C.A.F. pilots shot up a ship off Blankenberghe after attacking a gun post, a freight train and barges.

In August 1942, just after the Dieppe attack, the low-level experts went out to attend to a group of enemy ships which had been located by reconnaissance aircraft. Eight Hurri-bombers escorted by two squadrons of Spits were used on this trip. The Canadians in the escort made low-level attacks on four ships of from 1,000 to 1,500 tons and observed many hits, after which the Hurries came in with their bombs and added to the confusion by making direct hits on three of the four vessels.

Air-Sea Rescue Boats

From ground level to 30,000 feet and higher, and from the Channel to the extreme limit of the aircrafts' range, stretches the operational area of Fighter Command. Our patrols sweep through the Nazi sky, attack him on the ground, challenge him in the air and strike at all levels again and again. Such extensive operations cannot be carried out without frequent losses in both pilots and machines-especially when it is realized that frequently our machines must tackle the Channel crossing, though seriously damaged; so seriously, in fact, that it is frequently necessary to ditch them in the drink-in other words to abandon them over the Channel and take a chance on being rescued. This practice became so frequent that an Air-Sea Rescue Service was set up to fish out the pilots who were

forced to try their hand at swimming home.

These air-sea rescues frequently led to further combats with the enemy. Indeed, some of the heaviest engagements of the war have been fought by our fighters in defence of the rescue boats. When these high-speed launches dash out in answer to a reported ditching, the Nazi fighters come out to attack and hamper the work of rescue. More than one member of the rescue service has given his life in attempting to save that of another-and possibly of a Hun pilot, for the rescue service knows neither British nor German when a man is to be picked out of the water. To guard against these attacks our fighters are from time to time sent out as overhead cover for the speed boats.

On September 17th, 1941, several of our fighters were lost in the operation against Mazingarbe and the rescue boats were sent out to search for them. Nine Spitfires of an R.C.A.F. unit, guarding the rescue party, caught several Me. 109s as they were about to dive on a boat and promptly destroyed two and damaged a third of the attackers. The "destroyeds" were credited to Lee-Knight and Wood.

Again in December of the same year, Don Morrison, who has been mentioned so frequently in this chronicle, destroyed a Me. 109F while protecting a rescue party, as a member of a Spitfire formation which drove off the Hun attackers without loss to our side.

In July 1942, W/C Brendan Finucane, D.S.O., D.F.C., (known to all and sundry at Paddy) forced-landed his kite in the Channel on the way home from a mass ground strafe on northern France. As usual the enemy fighters gathered round the air-sea rescue boats which went out in search of the missing wing commander and other pilots who had suffered similar mishaps. About 25 FWs., which made up the attacking formation, sank one of the launches and set another on fire, just off Boulogne. Morrow had just returned from a routine formation flight and hearing of the rescue work in progress volunteered to lead his pilots on escort.

They found three launches near Le Touquet, one already on fire from a previous attack, when they were dived upon by from 15 to 20 enemy fighters flying in pairs and roaring down from the clouds 4,000 feet above. Morrow and his squadron formed a defensive circle above the boats and escorted them back toward Dover, all the time carrying on a running fight during which one FW. was destroyed. In this encounter F/L J. C. Hughes was wounded and baled out but was picked up by one of the boats.

On scores of other occasions pilots of R.C.A.F. squadrons have escorted rescue launches and aircraft on their missions over the Channel or the North Sea in search of airmen floating in their dinghies or Mae Wests. And many of them have themselves been rescued and owe their lives to the gallantry and self sacrifice of the Air-Sea Rescue Service.

September

After the excitement of the Dieppe operation the events of September 1942 seemed relatively less important for the R.C.A.F. squadrons in Fighter Command. Yet the bomber-fighter operations and offensive sweeps and even the occasional scrambles were not without their moments. True, the balance sheet for the month shows only three -enemy aircraft destroyed, with two probables and six damaged for good measure. But this is no yardstick by which to gauge the tempo of the war in the air. There was the steady plodding of the Flying Fortresses of the U.S.A.A.F. as they shuttled back and forth across the Channel by day, to batter at targets in Northern France and the Netherlands. With them Canadian squadrons frequently flew as escort. They went to Rouen on September 5th, to Meaulte on the 6th, Rotterdam on the 7th and, after a long interval, to Morlaix on the 26th.

On the first of these operations Don Morrison went to investigate two aircraft off Dieppe as the Forts were return-

ing from Rouen. These turned out to be Spitfires, but just then a FW. 190 heading for France appeared on his left, and Morrison got behind it. As the Hun did a half roll Don gave him a burst that sent him spinning down out of control, giving off dense white smoke, and another probable was added to an already imposing list. On the following day, September 6th, the Fortresses were out again. This time their objective was the aircraft factory at Meaulte and two Canadian squadrons formed part of the escort. Some thirty enemy fighters, attacking in small groups, were able to harass the bombers and Spitfires. Heavy flak was also encountered and one of the bombers was lost. A section of one Canadian squadron became detached on the way in and was heavily engaged throughout the operation. FS E. L. Gimbel fired a long burst into a FW. 190 which he pursued from 27,000 to 21,000 feet before breaking off his attack. He saw strikes on the wing, fuselage and tail of his opponent, but the final result was unobserved. The other Canadian squadron had better, though more varied, luck. F/L D. G. Malloy got a probable, since his opponent was seen by Keene as it dived straight down streaming black smoke; Bretz and Boulton each damaged another FW., but Sgt. G. J. Roan had to bale out and was taken prisoner.

In addition to these operations, the two Spitfire squadrons also engaged in several offensive sweeps. On the 16th they joined in a composite sweep with two squadrons of American P. 38s (Lightnings). Over Abbeville one squadron had a brief engagement with thirty or more enemy aircraft. P/O G. N. Keith turned the tables on two FWs. that tried to attack from the rear, one of which he sent spiralling down pouring out smoke. Shortly afterwards Sgt. C. J. Ross fired a short burst into another FW. that half-rolled and then dived, emitting black smoke.

Occasionally there were scrambles as unidentified aircraft appeared over England. Frequently there was no contact, but at 0930 hours on September 2nd, Morrison and FS

R. Reesor were scrambled and directed to two FWs. flying due south of Shoreham at 24,000 feet. Morrison closed in and riddled one with repeated bursts. The FW. flew steadily on its course in a gentle glide and crossed the French coast at 2,000 feet. The Spitfire pilot, flying close alongside, could see the German airman slumped over his controls, apparently dead: the aircraft had become a flying coffin carrying the body of its pilot back to France. Meanwhile Reesor had shot down the second FW., whose pilot baled out and came down in the Channel. Neptune was more merciful than Vulcan, for naval launches were soon alongside to pick the German up. The rescued man thanked his benefactors in perfect English. The naval crew naturally assumed that he was an R.A.F. pilot and sent him below to change into dry clothing, but a few minutes later an excited sailor came on deck to report that their guest was a Nazi. Reesor later received his victim's "Mae West", suitably inscribed by the German pilot, as a souvenir of the occasion.

Nine Canadian fighter pilots were awarded gongs in the month of September. On the 11th the *London Gazette* published the names of C. J. (Nobby) Fee, Fred Green and Phil Archer. The first-named was characterized as a "fine pilot and a skilful leader . . . mainly responsible for the high standard of fighting efficiency of his squadron". He had participated in the combined operation at Dieppe and set a most inspiring example. Green had also been at Dieppe, two of his three sorties involving low level escort duties. He had destroyed, up to the time of the award, one Me. 109E and two FW.190s. The third member of this trio had destroyed at least four enemy aircraft and on one occasion, though wounded in the leg, had flown his badly damaged aircraft back to base and made a skilful landing.

On the 18th F/L J. Whitham, who had been missing since August 28th, was awarded the D.F.C. He was an excellent flight commander whose fine qualities were well

illustrated when leading his section in attacks on enemy targets.

Four days later two squadron leaders were decorated. Norm Bretz had completed many operational sorties, including four low-level raids in Hurricane bombers during which two enemy destroyers were severely damaged. He led his squadron in four sorties at Dieppe, destroying one enemy aircraft and damaging another. Lloyd Chadburn also had led his squadron at Dieppe when it accounted for three enemy aircraft destroyed, one probably destroyed and seven damaged without loss of squadron personnel. Chadburn himself destroyed one E-boat and probably destroyed a Ju. 88, besides damaging other enemy ships and aircraft.

Ford was awarded a bar to his D.F.C. on the 29th for his part in the Dieppe operations, during which he had shot down two FW. 190s. On the same day the name of S/L R. B. Newton appeared in the *Gazette* for his leadership of a Canadian squadron at Dieppe. At the same time Murray, who had carried out sixty-one operational sorties, was awarded a D.F.C. to round off an imposing list.

October

October was an active month for R.C.A.F. fighters, but combats were few. The escorting of bombers continued to play a prominent part in Fighter Command's operations and there was a plethora of low-flying sorties and train-busting expeditions.

The Canadian squadrons again participated in the large-scale daylight offensives with which American Fortresses were becoming associated in the mind of the general public. In an attack by forty-eight of these heavy bombers on the aircraft factory at Meaulte on October 2nd, two of the Canadian squadrons formed part of the close escort, while three other Canadian squadrons had a part in the diversionary expeditions. Only one of the squadrons had any luck. Morrison (now a F/L) surprised a Me. 109F which he at-

tacked with cannon and machine-gun fire. There was a violent explosion in the Me.'s port wing and the Hun went down in a vertical dive, probably destroyed. Cosburn (now a P/O) damaged a FW. 190 in the same engagement. Reesor, however, failed to return from the operation. A week later a powerful armada of Forts, the largest ever sent out up to that date, struck at the Lille-Fives locomotive works. Again two Canadian squadrons formed part of the escort, which also included three units of Lightnings. Several engagements with the enemy took place without loss to the allied formations. Murray and Gimbel shot down a FW. which was seen to crash, and Murray damaged a second fighter of the same type. Our pilots destroyed five and the Americans forty-eight. Once again three Canadian squadrons flew together in a diversionary operation but failed to lure any of the enemy into the air. In the attacks on Le Havre on the 15th and 16th and on the submarine base at Lorient on the 21st, Canadian pilots were not involved in combat; nor did they encounter the enemy when two squadrons formed part of the cross-Channel escort for the Lancasters that raided Milan by daylight on the 24th.

Train-busting and ground strafing played a greater part in Canadian fighter activity in October. P/O L. W. Powell with Sgt. W. H. Tape and P/O J. Moul with P/O R. A. Buckham made up two well-known teams that attacked trains, wireless masts, camps, truck convoys, troops and other objectives, the destruction of which added further to the discomfiture of the Germans. A/V/M Leigh-Mallory sent a special message of congratulation to Powell and Tape after their show on the 14th, and another to the eight pilots who with Fee attacked a hutted camp at Abbeville on the 25th and left it covered by a pall of smoke. An idea of the nature of these raids can be obtained from a list of objectives attacked by Powell and Tape in the St. Aubin area on the 23rd: these included a motor vehicle, two engines, a lorry, an automobile, a tower, two flak posts and

three electric pylons. Unfortunately the team of Moul and Buckham was broken up when, after shooting up a group of blockhouses in the St. Valery-en-Caux and Rue areas (N. of Etaples), Moul was seen to bale out ten or twelve miles off the French coast. Minefields prevented rescue boats reaching him as he floated in the sea, and a Walrus rescue aircraft was unable to land because of the heavy seas running.

Meantime squadron commands were changed and units were moved from one station to another as it was sought to give now this one, now that, a period of rest in a relatively inactive sector. How a squadron was moved about can best be illustrated by following the peregrinations of one. From South Wales to Kent in the first week of the month and back again for a few days of convoy patrols, then the squadron pilots were sent to Wiltshire for three days and later returned to South Wales. In the last week of the month they moved to another Welsh station only to be sent back to Wiltshire again. Returning to Wales, they ended up, after one more move, on the station from which they had originally set out at the beginning of the month. The astonishing thing is that while all these moves were taking place they found time to chase the odd enemy aircraft, provide support cover for Fortresses, and follow a routine of convoy patrols, scrambles and ground-strafting patrols. A month in which the squadron's activities do not make the headlines is not a month of inactivity by any means. The score of casualties inflicted on the enemy for October was one destroyed, one probably destroyed, and two damaged, which was not bad considering the infrequency with which the enemy was seen.

There was one award of the D.F.C. during this period, Hodson's name appearing in the *London Gazette* on the 2nd for the inspiration he gave the squadron he commanded. The success of the squadron was in no small measure due to his leadership.

November

November was not such a good month. In the first place seven Canadian pilots were lost to the enemy's two. Furthermore, the weather was very bad for flying, which seriously handicapped large scale offensive operations and accounts for the preponderance of smaller low-level attacks in the record for the month. One squadron reported no flying on sixteen days. Again, two of the squadrons were withdrawn from operations throughout the period. Despite prevailing unfavourable conditions there were days when something could be attempted. The opportunity was never missed. In the early part of the month R.C.A.F. fighter pilot took part in five large-scale operations. On the first two the few Huns seen in the air dived away and refused combat, but on the 8th and 10th the Luftwaffe regained confidence and mixed it with our pilots. On the first of these occasions, when Forts set out with the locomotive works at Lille as their objective, two Canadian squadrons acted as forward support. Two FW. 190s were sighted behind and below by Morrison, who led his section down to the attack. More enemy aircraft then appeared and a fight began. One FW. went down in flames, but neither Morrison nor P/O D. R. Manley returned. At the time he was lost Don Morrison was the leading R.C.A.F. fighter pilot in Fighter Command, with six enemy aircraft destroyed.¹ From the same operation the C.O. of another Canadian squadron, S/L F. C. Willis and his wing man, Sgt. C. A. Davis, failed to return. They were last seen at 20,000 feet over France.

Though Canadian squadrons were out on the 9th their activities led to no engagements, but on the next day there was action again. Hodson, leading one of the supporting wings, saw four FWs. three miles west of Fécamp. He and Gimbel (recently promoted to P/O) attacked one which took a headlong dive towards the sea and was subsequently

¹ These included three shared with other pilots; he also had many "probables" and "damaged" to his credit.

confirmed as destroyed.

Locomotive-busting got off to a flying start on the 3rd, with twelve pilots heading for the enemy coast and returning with a score of six engines. The team of Powell and Tape crossed the Channel to St. Valery, where they attacked a freight train, leaving it enveloped in steam, and also fired bursts into two lorries, a motor car and a pylon. Three hours later the same pair brought two freight trains to a stop eight miles from Fécamp, with the usual clouds of steam pouring from the damaged boilers. On the 7th, four pilots accounted for five locomotives and three gun positions; two others made strikes on two engines and fired on a large lorry and a pylon. Powell and Sgt. W. H. Spence, flying between Isigny and Bayeux, found a large freight engine on which each pilot made five attacks before the engine blew up. They then fired on two more which came to a stop enveloped in steam. On the same day F/L R. A. Ellis and WO D. J. McCrimmon fired on three engines; one exploded, the second ejected steam in many places, while strikes were observed on the third. McCrimmon also scored hits on a pylon. But the weather held up trainbusting as it held up everything else. On the 25th, however, Powell was out again, this time with Sgt. W. D. Pagan, attacking two engines in a freight yard at Etretat and damaging two more further up the line. Pagan apparently was hit by flak in the attack on the freight yards and Powell lost his number two. Three days later the same thing happened again, when Spence failed to return from an expedition to Isigny on which two locomotives and a small shunting engine were damaged. But it should not be assumed that these activities were centred solely on the French coast. Several squadrons undertook missions when their field of operations extended over the whole coastal area of northern France, Belgium and Holland. It was while on such a flight on the 20th, to the Dutch coast, that F/L V. F. Patter-son, who had become separated from his companions, was presumably shot down.

Whenever weather permitted there was the usual round of convoy and standing patrols, with an occasional scramble as an unidentified aircraft was reported in the vicinity. None of these sorties resulted in any incidents.

December

Bad weather continued to hamper offensive operations in December. Squadrons in the more remote parts of the country logged as little as two-and-a-half hours' operational flying for November and three for December to the 200 or 300 hours of those in the more active theatres of operations. A Canadian squadron in Lincolnshire did manage to get a part in an attack on the Phillips electrical works at Eindhoven; in a sweep over Dunkirk, Boulogne and Le Tréport on the 12th; an operation to Den Helder on the 13th and another attack on Den Helder two days later; but the R.C.A.F. pilots reported neither enemy aircraft nor flak during any of their sorties.

With the Canadian wing operating in the south it was otherwise, though two of these squadrons got off to a bad start on the 4th. Between Marquise and Audruicq, as the wing was turning to withdraw from the patrol area, a number of the enemy dived (smoke trails had been seen earlier at some height above the Spitfires). Frost was coating the outside of the windshields and hoods, the outside temperature being about 50° below zero, and one Canadian squadron became completely broken up. The higher squadron kept together and covered the withdrawal as our Spitfires fought their way out. Four pilots did not return, Sgts. B. Nickel, H. Batters, R. B. Honeycombe and H. E. McGraw. Batters baled out over France and Nickel was seen to crash before the engagement began. P/O J. W. Fiander was wounded in the left knee and had to abandon his kite over the Channel, but was picked up by an air-sea rescue boat. The losses, however, were offset at least in part by the victories of Fee (now a W/C), F/O H. A. Simpson and Keene.

The wing commander had become detached from the squadrons when his hood frosted up; he ordered his wing to reassemble over Boulogne and while flying in that direction saw four FWs. on the tail of a lone Spitfire. He followed, fired, and caused the Jerries to turn off; one FW., which had been hit at the port wing root, broke away in a spiral dive and was probably destroyed. The other three dived away inland. Simpson, who lost consciousness due to oxygen failure just before the action began, recovered at 15,000 feet and pulled out of his involuntary dive. While he was looking for his squadron two FWs. made a head-on attack and two others closed in from the rear. After a desperate combat, in which he saw his bursts damage two of the enemy, Simpson broke clear, dived for the Channel and crossed at sea level. His aircraft had been struck by machine-gun fire during the action, however, and the engine, out of oil, seized, forcing him to crash-land at Lydd. Keene had also lost his formation when his hood became completely iced over, and went into a spin. When his wind-screen cleared he was alone, with a lot of FWs. about. Keene pounced on three below him, opened fire on one and pumped lead until his ammunition was exhausted. The FW. began to smoke as it headed vertically for the ground. The Spitfire pilot watched it until it crashed into a small wood near Samer. More FWs. then started in pursuit, but he out-climbed them and headed for the white cliffs.

A sortie on the 6th, in which Lille was bombed, netted nothing; but on the 12th, when American heavy bombers attacked targets at Rouen, there was an engagement between FWs. and one of the Canadian squadrons, as a result of which a Spitfire and a FW. were seen heading straight down for the sea at 2,000 feet. Patches of oil were seen on the water and P/O S. W. Pearce did not return. In a later phase of the same operation, as the squadrons were returning across the Channel, Cosburn dived on the tail of a FW. that was returning to France on the deck. He gave it a burst

and black smoke came out of it, but his windscreen clouded up and when he climbed away he could no longer see the FW. He was credited with a damaged.

On the 20th, in another attack on the Romilly aircraft park, six Canadians came to the protection of a Fortress crew who were baling out over Dieppe and P/O W. B. Needham scored hits on a FW. that was driven inland over France obviously damaged.

A mass low-level attack by Spitfires on the Fécamp-Le Havre area at the beginning of the month netted an army lorry, a machine-gun post and two freight engines. A week later Gimbel and Chapin scored hits on a train near Bayeux. Apart from this, other minor offensive operations proved uneventful.

Defensively the usual patrols were carried out, Cosburn emptying his cannons and machine-guns into a FW. near Hastings on the 11th. The enemy aircraft crashed into the sea. As three others tried to get revenge, F/O T. K. Ibbotson came to the rescue and drove them off, damaging one.

The month's score sheet showed two enemy aircraft destroyed, one probable and five damaged, for five of ours missing and one pilot wounded. For the year the R.C.A.F. day fighter squadrons in Great Britain had a score of 40 enemy aircraft destroyed, 26 probables and 93 damaged. The really important question is, however, "Did we succeed in keeping the enemy squadrons tied down in the West, thereby relieving pressure elsewhere?" The answer to that question is obviously in the affirmative.

1943

January

The new year opened with a very active month for four of the R.C.A.F. fighter squadrons. Despite very unfavourable weather conditions there were sweeps and ground strafes and the usual run of patrols. The enemy

seemed reluctant to engage. Perhaps our new flight formation puzzled them. Only once in the nine times in which our fighters participated in operations did the enemy show signs of fight. On the 13th, after a late morning foray which passed without incident, two Canadian squadrons refuelled and took off to patrol the Sangatte-Dunkirk area while Fortresses were attacking Lille. Nine FWs. were seen but they were in no mood to fight. A Me. 109F, however, succeeded in getting on the tail of F/O (recently commissioned) Hugh Godefroy's Spitfire before the pilot realized that the aircraft coming up behind him was hostile-it was the first time in over two months that Messerschmitt fighters had been seen in that area. The German's burst damaged Godefroy's machine but he flew back safely to base. The score was evened by P/O O. R. Brown, who damaged a FW. 190.

Offensive sweeps by fighter aircraft to Abbeville and Cherbourg on the 21st and 23rd stirred up plenty of flak but no fighter opposition. But if the sweeps were unproductive, thrills were supplied by low-flying ground-strafting attacks. Altogether some thirty freight engines and numerous other targets sustained damage as a result of these raids, while four FWs. were destroyed and seven damaged in the course of a single attack. January 17th had opened with a sweep by three squadrons in the Le Tréport-Abbeville area, during which four locomotives had been attacked. Four FWs. had, indeed, been seen, but there were no engagements. Less than two hours after their return the Canadian squadrons set out to repeat the operation in the St. Valery region. While they were attacking locomotives and other ground targets they were bounced by a score of FW. 190s, who dived out of the sun. Many individual dogfights resulted as the fighters swirled about above Bolbec. Fee, who led both the day's operations, took the brunt of the attack and both he and his number two, F/O M. J. Sunstrum, were lost. The wing commander was heard to say over his R/T, "I'm hit,

fellows, and I'm going out".¹ P/O A. M. Skinner was also missing on this operation. Three unidentified aircraft were seen to dive into the water off Fécamp, but whether they were friendly or hostile our pilots could not say.

The other Spitfires quickly avenged the loss of their leader. Fred Kelly (now a S/L) destroyed one FW. while Dick Ellis pursued another which, attempting evasive action, half rolled too close to the ground and crashed. A third FW. was destroyed by Gimbel and a fourth by Malloy (now promoted to S/L). In addition, seven FWs. were damaged by Godefroy, P/Os E. J. Ross (two), M. Johnston, and McCrimmon (recently commissioned), WO J. D. Mitchner and FS F. B. Evans. A week later an attack by one squadron on ground targets resulted in damage to trains and flak posts. Sgt. J. R. McLeod, who was later reported a prisoner of war, was lost on that operation.

Defensive patrols in general proved uneventful, but one on the 20th provided some excitement for Godefroy and MacDonald. These two officers were on sentry duty between Beachy Head and Shoreham when they saw thirty or more FW. 190s coming over the Channel from the hills west of Newhaven. The Germans were returning from a daylight low-level raid on the outskirts of London, in retaliation for an attack on Berlin. Climbing to the Jerries' altitude Godefroy engaged one which crashed into the sea off Friston, while MacDonald damaged two more.

There was a certain amount of shifting to and fro during the month, so that some squadrons might be sent to more active zones of operation and others given a well-deserved rest. Usually the "rest" meant maintaining convoy patrols and conducting sea searches. Occasionally something hap-

¹ Three weeks later the *London Gazette* announced the award of a bar to W/C Fee's D.F.C. The citation commended him as a "brilliant leader who has set a splendid example of courage and determination", who had always shown "exceptional enthusiasm to engage the enemy and remarkable coolness under fire".

pened as when, on January 2nd, two pilots hunting for survivors of a ship that had been sunk, found two men floating in a lifeboat in a very rough sea and directed a vessel to their rescue. Flying other than operational usually meant formation flying, aerobatics, cine-gun exercises and the like, which necessarily involved a certain amount of risk. Though there were occasional fatalities, on the whole training casualties were very low.

Three new gongs were awarded to Canadian fighter personnel in January. Dick Ellis had taken part in 58 sorties over enemy territory and assisted in damaging five locomotives. He had shared in the destruction of one enemy aircraft and damaged several more. L. W. Powell had taken part in many operational sorties too, more recently being engaged in low-level attacks over northern France during which he severely damaged nineteen locomotives. The third member of the trio, Cosburn, had taken part in numerous operational sorties, had destroyed one enemy aircraft, shared in the destruction of another and damaged still others.

February

For some of the fighter squadrons the month of February was devoted mainly to training and practice. Their infrequent scrambles usually ended in establishing the identity of a suspect aircraft as friendly; at any rate they had no contact with the enemy. One of these squadrons was taken off operational flying early in the month, a step which precluded any score on their part against the Hun.

The other squadrons, situated in the south of England, led a much more exciting life. Bomber escorts and sweeps and the usual low-flying over ground targets by individual pilots occurred with great frequency. The escorting operations were for the most part uneventful, but occasionally some fighting developed. On February 3rd, for instance, while Canadian squadrons were escorting Venturas to St.

Omer, a number of FWs. were seen coming up from below to engage the bombers when Boulton led his squadron in to attack and was himself attacked by many more FWs. He notified the wing leader that he needed help. His squadron then engaged in a running fight all the way to the coast at Calais. Three officers failed to return, F/Os R. J. Turp, J. McKendy and J. P. Gofton, the last named being subsequently reported a prisoner of war. Buckham shot down one FW. and Boulton probably destroyed another. F/ O J. Rainville, after breaking off an engagement with one FW., found another on his tail. His adventure is perhaps best told in his own words:

There was another FW. 190 on my tail which fired at roughly 350 yards, his gunfire striking my petrol tank and my starboard aileron. My trimming tabs were gone and I had gunshot in my leg. He broke away and when I looked for my squadron I could not see them. The only Spitfire I could see was one six or seven miles away; black smoke was pouring out of it and it was heading for the Channel. I was attacked by FW. 190s several times but shook them off and dropped for cloud cover to 8,000 feet. I came out just north of Boulogne, . . . on arriving at the coast there were four FW. 190s waiting about 2,000 feet above me. They commenced the attack and I dodged them as best I could by skidding. At this point I found my guns to be unserviceable. I couldn't use my engine violently as my oil temperature was rising and most of my gauges were unserviceable, although my engine functioned. As I couldn't climb I started diving slowly, opening to full bore, trying to get to the English coast. I started giving a Mayday, giving in error Yellow 2 as my call. I had a reply to this asking for my course and height. I replied that I was steering due west and at about 3,000 feet. My engine commenced to surge and I decided to bale out. By this time I was halfway across the Channel. The FW. 190s were still attacking, hitting the aircraft all over. I gave another Mayday saying I was baling out. I did

not attempt to do so immediately as the FW. 190s were still attacking. They must have hit my radio shortly before this, as at this time I tried to give another Mayday unsuccessfully. I pulled out my R/T plug and unhooked my oxygen apparatus and threw my helmet away. The enemy then turned back to France and as they did so my engine failed. I was then too low to bale out. I was by that time near Goodwin Sands, and I decided to ditch the aircraft. I have no idea of my speed on hitting the water as my A.S.I. was unserviceable. I was still wearing my harness as I touched the water; my under-carriage was up. The only injury I received at this time was a scratched nose. I climbed out immediately and inflated my dinghy and sat on the fuselage of the aircraft, remaining in this position, there being only 3 or 4 feet of water over the sands. I removed the petrol cap and stuck the telescope flag in the tank. The time was approximately 1545 hours. At once I saw 7 or 8 Spitfires coming from seawards almost over Manston at about 5,000 feet. I fired a rocket signal and apparently they failed to notice it as they gave no sign of recognition. Approximately 45 minutes later I saw two Typhoons flying North. I fired another signal and they circled me. Shortly after, the R.A.F. rescue launch came. I had to walk more than half a mile as they could not approach closer. I was taken aboard and taken to land.

On the 13th there were two operations to bomb docks and shipping at Boulogne. In these a number of Canadian squadrons participated, but like one on the 10th they turned out to be uneventful. On the 15th there were engagements with FWs. This time the operation was directed against docks and shipping at Dunkirk. As one of the Canadian squadrons was over the Goodwin Sands at 19,000 feet it was attacked by 20 FW. 190s. The squadron was ordered to break off and a general *mêlée* ensued. F/L C. M. Magwood made a starboard-quarter attack on a FW. 190, firing two bursts of cannon and machine-gun. He saw grayish white

smoke pour back from the engine when the aircraft rolled over and started to spin to the left. Magwood was credited with one aircraft damaged. Ford, flying the aircraft *Canadian Pacific*, had bursts on four enemy aircraft but saw strikes on only one, from which large pieces fell away. This officer was also credited with one damaged.

There were two fighter-bomber operations again on the 26th. The first, to Dunkirk, was uneventful, but in the afternoon while flying at 35,000 feet over Le Touquet, Keltie damaged one FW. 190. On the 27th a similar expedition directed at Dunkirk resulted in a conflict in which one squadron acted as bait to lure twelve FWs. into a position where another Canadian squadron could bounce them. The stratagem succeeded. During the encounter three separate splashes were seen in the sea. Three FWs. were destroyed, one by Gimbel, who saw the enemy's starboard wing collapse before it crashed into the sea. The pilot did not bale out. P/O L. M. Cameron got onto the tail of the second Hun and saw his adversary spin down after a number of strikes on the fuselage. A splash in the sea was observed in this case too. The third one was the victim of Ford, who saw a stream of white stuff, which may have been petrol, coming from the enemy just before it rolled to starboard, flicked back and forth and gave off a stream of black smoke. At this juncture a splash in the sea was observed by another pilot. Ford was credited with a damaged when he fired a long burst of cannon and machine-gun into another FW. 190 and saw strikes and flashes all along the wings and fuselage. The enemy aircraft climbed a bit, rolled and dived away to port. Unfortunately F/L P. T. O'Leary was presumably shot down about this time. An air-sea rescue search was conducted over the area of combat but O'Leary was not found.

In a sweep over north-eastern France on the 8th the Canadian squadrons encountered no enemy aircraft but they did report heavy and accurate flak. On the 16th, however,

in the second sweep of the day, about forty FWs. were reported at Gris Nez. At 28,000 feet one squadron, after breaking off to evade two unidentified aircraft astern which turned out to be Spitfires, discovered that Brown, F/O S. M. Connacher and F/O Williamson were missing. Near Le Touquet a dozen FW. 190s were seen and as the Spitfires were about to engage, another eight were observed. The two groups eluded combat but the first subsequently tried to bounce the Spitfires, as a result of which Keene damaged one.

The month of February also saw a certain amount of ground strafing. MacDonald and F/O R. Wozniak on the 11th attacked a locomotive near Tournières; MacDonald, with his vision hampered by oil on the windscreen, struck a tree, part of which was rammed into his radiator and carried back across the Channel. His throttle was jammed but he made a fine landing without engine. Gimbel and P/O H. J. Dowding attacked a train in the Dieppe area. F/O H. Westhaver and P/O W. T. Lane attacked a locomotive near Le Tréport and another in freight yards near Gamaches. Westhaver climbed sharply to avoid a chimney, his aircraft emitting a puff of black smoke. At 1,500 feet he jettisoned his hood and baled out, his parachute coming into full bloom at about 1,000 feet. Two days later FS Goudie and Sgt. W. J. Kinnaird made quite a name for themselves by damaging six locomotives. On a second trip Goudie had the misfortune to have his aircraft hit by flak and then strike a tree. He was able to get back, however, and made a good landing. On the 18th P/O H. A. Terris and FS R. W. Lamont attacked two light gun posts and a flak tower at Ste. Hélène and damaged two stationary goods engines at Cany-Barville. On the 28th P/ O Siddall and Lamont set off on a ground strafe but Lamont had to ditch in the Channel. Siddall orbited until the arrival of an air-sea rescue aircraft and his partner was picked up.

Besides ground strafing, Canadian pilots participated in

a number of air-sea rescue patrols, scrambles, weather reconnaissance flights and the like. The weather at this time of the year is not always good and for the week of February 18th-25th there was practically no operational flying at all. At other times planned operations had to be called off at the last minute. Nevertheless Canadian squadrons put in a fairly full month.

On the second of the month awards were made to two Canadian officers who had distinguished themselves on operations. The first of these, Malloy, had taken part in a large number of sorties and as his citation truly said, "he was an outstanding leader whose skill and devotion to duty have set an example worthy of high praise". The second, Fred Kelly, had also completed a large number of operational sorties, including a number of low-level machine-gun raids on ground targets and several fighter-bomber attacks.

March

March was one of the quietest months in the winter of 1942-43. One squadron reported "No flying" on half the days of the month. Another was exclusively employed in army manoeuvres and training. Others, after spending part of the month on the same manoeuvres, got into inconclusive actions with the enemy or spent their time on patrols and reconnaissance sorties or in formation flying and ciné-gun exercises.

One sortie, to Amiens on the 13th, resulted in encounters with FW. 190s, in one of which Cameron and McCrimmon attacked a group of three enemy aircraft. In this action one FW. Was damaged but McCrimmon's engine caught fire, probably due to enemy action. When last heard from, McCrimmon informed his No. 1 of his trouble but was not seen again. Ford attacked a FW. with several persistent bursts of cannon and machine-gun fire, finally closing to fifty yards. He saw strikes all over the aircraft, the whole of the cockpit was blown off and a gaping hole

appeared behind the pilot's seat. Bits kept flying off both sides and then there was a large orange explosion in each wing as though the ammunition drums had been hit. Everything seemed to crumble up. Half the starboard wing fell off and the port wing crumbled away. The aircraft then turned over sideways and dropped straight down, hardly recognizable. Thus another victory was chalked up to Ford and the good old *Canadian Pacific*. Near the French coast P/O C. G. Cumming gave a Mayday and was not seen again; Sgt. R. Dunbar, who had been alternately lagging behind and catching up, was presumably shot down near Grandvilliers.¹ One last effort was made by the FWs. to get Ford, who had momentary engine trouble when crossing the coast. Five of the enemy dived out of the sun on the tails of Ford and Lane. A considerable dogfight ensued and it was all the Canadian pilots could do to avoid being shot down. Lane's aircraft sustained hits on the hood and round the cockpit before the enemy gave up and dived away.

Of interest in this action were the tactics of one enemy pilot observed by Ford. This pilot flew about 3,000 feet above the squadron, dived toward the bombers that Ford and his squadron were protecting, and then got chased out of sight only to reappear 3,000 feet above as before. This manoeuvre was repeated several times despite a variety of dodges designed to trap him; but he was obviously an experienced pilot engaged in studying our formation and tactics. He ran no needless risks and made no determined attacks. He lived to fight another day.

Sgt. H. E. Morrow made his first sweep on this occasion. On landing he told Magwood, his leader, in correct R/T procedure, that he was all right, got out of his aircraft and sauntered away with his hands in his pockets. The wings and tail of his machine had been ripped off as he landed under high tension wires, across a ditch and a road,

¹ P/O Cumming was subsequently reported by the international Red Cross as killed.

through a fence and a young forest of trees each of which was four inches in diameter. It might be mentioned that of the whole squadron only three were able to return to base; the rest, being short of petrol, had to land elsewhere. Morrow was one of these last.

Most of the other operations carried out during the month were devoid of incident. On the 8th, however, Canadian squadrons were escorting Fortresses back from Rennes when a pair of FWs. flew alongside Godefroy's section. Godefroy waited until he found himself up-sun of one and then attacked. He saw strikes in the cockpit area and the port cannon exploded. The 190 rolled over and spun down: Magwood saw it crash into the ground. MacDonald saw two FW. 190s coming in behind his section, but when Ford broke, the 190s turned away. MacDonald, now in good position, gave a short cannon burst and followed it up with a long one a few seconds later. He saw a huge piece near the cockpit, and the wing, fall off and finally he saw a splash in the water. This aircraft was obviously destroyed. Cumming scored strikes on another FW. and as it pulled up into a stall Magwood had a point-blank shot at it. Cumming followed up with a good burst, scoring further strikes on fuselage and wing. Other pilots reported seeing the aircraft diving steeply and the FW. was claimed as damaged.

Later in the month P/O R. T. Heeney engaged in a dog-fight over the Channel. He made no claim but later, on the evidence of his camera, he was awarded one FW. 190 damaged.

A dispatch filed by F/L Basil Dean, a public relations officer, on the 30th, is of sufficient interest to quote in full, particularly in view of its reference to the mutual relations of aircrew and ground personnel:

Members of the R.C.A.F. Spitfire squadron which is commanded by Squadron Leader L. S. Ford, D.F.C., of Liverpool, N.S., have just celebrated their second anniversary. The unit was the first R.C.A.F. squadron to be formed overseas, as distinct from the three original

squadrons which came over as complete units, and was founded in the spring of 1941. Now attached to the R.C.A.F. fighter wing, the squadron celebrated its second birthday with a banquet which was attended by all squadron members as well as by Group Captain Fenton, D.S.O., D.F.C., R.A.F. Station Commander, and Wing Commander J. E. Johnson, D.F.C., who recently took over leadership of the wing. Both these officers are members of the R.A.F. Squadron Leader Ford, who has commanded the squadron since last August, first served with it as a pilot officer in 1941, and is one of the original members. (He flew with Hurricane bomber squadrons of the R.C.A.F. and the R.A.F. during the winter of 1941 and the spring and early summer of 1942.) In his speech at the celebration, he recalled that the squadron started off with Tomahawks, but was later converted to Spitfires, on which it has carried out all its operational flying. The best day's work it ever did was over Dieppe, he said. (The squadron destroyed five enemy aircraft that day and probably destroyed or damaged many others.) "As for that day," he added, "all I can say is 'Thank God we had ground crews,' because they made the job possible. I want to say how much we appreciate the work of the people commonly known as erks. Pilots come and pilots go, but erks seem to go on forever." Today the squadron is flying the newest model Spitfire and has chalked up many successes since it became part of the R.C.A.F. Fighter Wing.

One other event of the month worthy of record was the award of the D.F.C. to Gimbel, an American in the R.C.A.F. He had taken part in a large number of sorties over enemy territory and had destroyed one enemy aircraft, shared in the destruction of another, probably destroyed two more, shared in a probable, damaged one and shared in damaging another. He had also damaged four locomotives. It was a well-deserved gong.

April

Squadrons in quiet sectors had little or no action in April. Indeed, one squadron had no engagement with the enemy at all, though there were occasional scrambles. One did participate in an uneventful diversionary sweep, and shepherded straying ships, dispersed by stormy weather, back to their convoys. Another put in over 1,000 hours of training. Even in those areas where the tempo of warfare

was normally faster, operations for some squadrons were totally unproductive.

April 1st was the silver jubilee of the Royal Air Force and those squadrons that did get into action did their best to make the month a memorable one. No effort was spared to engage the enemy wherever he could be found. One squadron alone shot down eleven FWs. and damaged another. There was the usual escorting of bombers. On the 13th, Canadian squadrons acted as escort cover and close escort for Ventura bombers attacking freight yards at Abbeville. A score of FWs. were sighted flying in line abreast at 17/18,000 feet, but on being approached by the Spitfires they half-rolled and dived away inland. It was the same story on the 16th. Eight or more FWs. and Me. 109s were seen near St. Inglevert, but though our fighters turned to engage, they could not close within range. The next day to some extent made up for this. There was a bright sun and very slight haze with no clouds, as once more the Canadian squadrons acted as escort cover and close escort to Ventura bombers which had the freight yards at Abbeville as their objective. Some of them engaged a small number of enemy aircraft but made no claims. The others, however, climbed to 33,000 feet and bounced about fifteen FWs. near Le Tréport. Godefroy picked on one and gave it a burst of cannon fire. He saw the port cannon magazine explode and observed hits on the fuselage in front of the pilot. The enemy spun down and burst into flames and the pilot baled out. As Godefroy climbed back again he saw another FW. go into the sea with a parachute going down close by. This was probably the victim of P/O P. K. Gray, who had dived with Godefroy and attacked the port aircraft of the Hun formation. He fired and the enemy went into a half roll. He fired again and the FW. went down in a spiral emitting white smoke. The enemy pilot baled out and the aircraft dived into the sea.

There was a second operation on the same day, this

time to Caen freight yards. On the way back there was an engagement with four Me. 109s and four FW. 190s. Boulton destroyed one Me. 109F, while pilots of another squadron engaged the FW. 190s. Magwood led P/O F. C. McWilliams in to the attack on the FWs. One enemy aircraft pulled up sharply through the attacking Spitfires and then turned sharp right towards the French coast. Magwood half-rolled down on top of the 190, which also half-rolled down but did so too low. The enemy pilot tried to aileron out but it was too late and he crashed into the sea. Neither Magwood nor McWilliams had fired a shot. Godefroy, about to fire on a FW., had to pull up sharply to avoid a collision with a number of Spitfires which broke across him. He afterwards saw two disturbances in the sea, one of which was certainly where an aircraft had gone in, being vividly stained with green. The other might have been made by the pilot of this or some other aircraft. Besides this incident, F/O N. R. Fowlow fired at a Me. 109 which pulled up and then dived away in front of him. He saw no results and made no claim. P/O D. H. Dover also saw a Me. 109 climbing into the sun and fired at it from the beam, but due to the sun could see no results. As he turned away he came almost head-on at a FW. 190 which was diving towards the French coast below him. He fired at short range but saw no hits. However, Brown, who was behind him, saw the 190 dive into the sea. On the evidence available it appeared that the various sections of the squadron were all involved with the same FW. 190, with no pilot appearing to have accounted for it definitely. For that reason the whole squadron shared in the credit for destroying one FW. 190. Under the term sweeps a great variety of activities is included. These actions sometimes involved hundreds of aircraft while others were undertaken by pairs or even by a single pilot. The morning of the 3rd, fighter squadrons went to Ostend and returned without incident; but in the afternoon, in a sweep over the St. Omer area, about a score of

FW. 190s appeared in fours line abreast at slightly staggered heights and in excellent position for a bounce. The Canadians attacked. Ford sent one of the FWs. down in a tight spin as it poured black smoke and flames from the cockpit, which gradually enveloped the whole aircraft "like a ball of fire". Magwood got in a burst on another, causing a series of flashes and flames from cannon strikes all round the centre section of the fuselage and wings. Chunks flew off and then the whole aircraft disintegrated, leaving only a black cloud hanging in the air.¹ MacDonald also attacked a FW., causing its port oleo leg to drop and the coop to fly backwards. There was a streak of white beside the aircraft which he recognized as a parachute. W/C Johnson, who was leading the wing, also destroyed one FW. Meantime Boulton's squadron was also engaged, and its leader destroyed one FW. 190, Buckham and Keene probably destroyed one, and F/O J. A. Rae damaged another. Unfortunately F/O A. M. Watson failed to return, the only casualty on that day, though P/O C. S. Pope's aircraft sustained damage from flak in the earlier operation.

The next day also proved exciting. One squadron saw 30-40 FW. 190s, but there was no engagement. Another, acting as first withdrawal cover for Fortresses returning from Billancourt, observed one of the Forts spinning down as FWs. made head-on attacks in pairs and fours. The Canadians came to the rescue and attacked. Ford closed in on one FW. to about 200 yards and gave it a long burst. A big explosion followed and fragments of the aircraft began to fly off. The wheels came down and the whole front of the aircraft was engulfed in solid yellow flame. The port wing

¹ F/L C. M. Magwood was awarded the D.F.C. on 18th May, 1943. His citation in the *London Gazette* states that while escorting bombers he met much opposition, shooting down two enemy aircraft, and that on the previous day he had caused another to disintegrate in the air. He had completed 51 sorties and had shown great courage and devotion to duty.

broke upward and the aircraft fell away.

At this point Gimbel and F/O W. J. Cameron turned towards the bombers. Cameron saw a Fortress shoot down an FW. 190 as he and Gimbel dived on another about 2,000 feet below. Gimbel fired and Cameron saw pieces fall off as the enemy aircraft rolled over and went straight down. Gimbel was credited with one FW. 190 damaged. As this combat ended three FWs. came in close line astern from 200 yards behind. Cameron called, "Watch out, Ed!" as he broke to starboard and upward. There was no reply. As Cameron came round, well above, he saw a Spitfire going down in a gentle dive streaming smoke. This was the last seen or heard of Gimbel. Some minutes later, though not in the same vicinity, Cameron noticed a parachute fully open at 12/15,000 feet. Spitfires and FWs. were milling around in the neighbourhood and it was thought this might have been either Gimbel or Sgt. L. J. Deschamps,¹ who was also missing after this operation. Magwood meantime had engaged a 190 which took evasive action in a diving turn and was seen to crash on the edge of a large wood in the neighbourhood of Bellencombe. Then Magwood closed in on another FW., getting in a short burst without - result. As the aircraft broke down and to starboard, Magwood saw Deschamps scoring cannon strikes around its cockpit, which was enveloped in flames as the aircraft spun down. A short time later Deschamps was seen by Magwood as he was attacked by two FW. 190s from above and out of the sun. Deschamps skidded off to starboard streaming glycol. Magwood had running engagements until crossing the coast of France near St. Valery, where he dived down beneath a 190 and came up dead astern at about 150 yards range. He gave a short burst and saw flashes of flame from cannon strikes all round the cockpit and along the starboard wing; Chunks flew back, the cockpit was enveloped in

¹ It was learned via the International Red Cross on May 1st that Sgt. Deschamps was killed.

flames and the enemy fell off to the right, diving vertically. Two splashes followed. MacDonald also got on the tail of a FW. 190 that he singled out from a gaggle of about twenty that were following the bombers. He fired a burst and saw the enemy's starboard wing tip come off and bright scarlet flames in the cockpit. Some white stuff flew back on to his and Sgt. McGarrigle's windscreens. Then the FW. went into a tight spin and a splash followed shortly afterwards. This FW. was claimed as destroyed. An interesting observation on the camouflage of the enemy aircraft was to the effect that a few had red, white and blue stripes on the fin, similar to the British markings.

The next day Canadian squadrons participated in a Fortress raid on Antwerp when one squadron observed three FW. 190s which did not attack. Off Nieuport another squadron met thirty or more FWs. manoeuvring into the sun preparatory to making an attack. Johnson and Boulton led the squadron to engage the enemy. Boulton damaged one and Rae another, while Johnson damaged three. The FWs.' attacks on the bombers were determined and persistent and mostly from ahead, above and below, in singles, twos, fours and sixes.

The 6th was clear and cold with a slight wind. A large ground strafing expedition was undertaken. Along the Neufchatel-Dieppe railway and the Londinières-Neufchatel line ten signal boxes, four small switch boxes, a warehouse, freight cars on a siding, and two army trucks were attacked.

Another great ground-strafing expedition, composed of several squadrons, took place on the 14th, when considerable damage was caused to locomotives, transformers and various buildings with cannon and machine-gun fire. F/L W. T. Johnstone's aircraft was struck by enemy aircraft fire and he was forced to bale out off Cherbourg. He was later seen floating in his dinghy. Eight aircraft patrolled the area for a time. Still later ten aircraft noted two dinghies where there had been only one before. A Walrus was seen to res-

cue occupants of both, but neither of these was Johnstone. A search for a third dinghy proved unavailing and Johnstone was posted as missing. F/L J. G. Banford also failed to return from this sortie. He was last seen diving to attack a locomotive in a valley. Ball was shot down, too, when twelve FWs. made a sudden attack. His loss was avenged by Pope, who managed to destroy one enemy aircraft while F/L G. C. Semple and F/O A. M. Barber shared in the destruction of another.

One shipping reconnaissance proved eventful. A Canadian squadron sighted two ships going south and proceeded to attack them. Six FWs. came out from the mainland and a dogfight ensued during which Kelly claimed one FW. as probably destroyed. Twenty miles from the English coast W/C P. G. St. G. O'Brian's aircraft started to stream glycol and shortly afterwards he baled out and climbed into his dinghy. His position was given and he was soon rescued.¹

Ground strafing by individuals was limited during April. Kinnaird went off to an area between Cherbourg and Bayeux but did not return. A search was undertaken in case he had come down in the Channel, but nothing was seen. His loss was keenly felt, for he was a fearless pilot with no less than thirteen damaged trains to his credit. One other important event should be recorded for April. Hodson was awarded a bar to his D.F.C., after commanding his wing for almost two months and leading it on numerous operational flights.

May

It is traditional that May weather in England is fickle. One squadron in a quiet sector in the north reported very

¹ W/C O'Brian, a Canadian in the R.A.F., already had the D.F.C. A bar was added to his Cross some time after this episode. His father, Group Captain G. S. O'Brian, A.F.C., of the R.C.A.F. was the justly popular commanding officer of an R.C.A.F. Reception Centre in England for many months.

high winds, snow on two days, and on another occasion haze so thick that "even the birds walked". Consequently there was little activity. True there were scrambles, but the enemy was never encountered-or turned out to be friendly. Even in the front line it could and did happen that a squadron would pass through a dull and uneventful period. One squadron spent its time on convoy patrols and making occasional sweeps across the Channel, but got into no conflicts with the enemy. Another, after many dreary shipping reconnaissances and some uneventful sweeps, rounded out the month with a sweep to Flushing, during which some excitement occurred when the squadron was jumped by six FW. 190s. F/O J. G. Torney was hit and baled out but he was rescued and taken to Dover, where it was found he had sustained a slight injury to his left leg. Chadburn saw strikes on one aircraft which he claimed as damaged. A third squadron did enjoy a certain amount of action in the early part of the month, but was then taken off operations for the rest of the time preparatory to moving to another station.

Bomber-fighter operations produced some excitement, as usual. On the 11th, Canadian squadrons, as part of an escort, sighted some FWs. near Gravelines. W/C Johnson destroyed one. Two days later there was a running fight between St. Omer and Gravelines. About twenty enemy aircraft attacked the Canadian squadrons, some diving from above and behind to come up underneath for belly attacks. Magwood half rolled out of the sun as four FW. 190s hove into sight. All but one of the four took evasive action-the other starting to break to port, but too late. Magwood opened fire and the enemy's hood and bits of wing flew off as cannon shots found their mark. The aircraft then rolled over on its side and spun slowly down with smoke and flames billowing from its cockpit. Magwood also engaged another Hun on the way out, which made his claims 'for the day one destroyed and one damaged. Boulton destroyed

one and damaged another, while F/L R. H. Walker and Rae also destroyed one each. While slight damage was inflicted on three of our aircraft, we suffered no casualties.

On the 15th, Bostons escorted by fighters bombed Poix. Good bombing was observed and the bombers were safely escorted out. Then more than thirty enemy aircraft were seen, mostly 109s, some distance below at about 18,000 feet. MacDonald climbed to cover one section which was attacking two 109s and saw two more of the enemy below his starboard wing. He dived on the rear one and scored strikes on the engine, cockpit and fuselage. Both wings crumpled and the aircraft fell apart in-the air. MacDonald then attacked the other 109, causing sufficient damage to make it roll off to port and downwards. At this point F/L L. B. Madden, out on his first sortie, dived after the damaged 109. He was called back by his flight commander but made no reply and was seen and heard no more. One veteran Canadian officer, P/O C. D. Myers, also failed to return from this sortie. F/O C. D. Aitken and Lane, meanwhile, had got separated from their squadron as they attacked two pairs of logs which divided. Shortly afterwards twelve 109s flying in our Spitfire formation, attacked Lane and Aitken. They evaded by turning and climbing rapidly but a 109, with four or five 190s flying in star formation, attacked from port and behind. Aitken broke to port, while Lane went to starboard and was seen no more. It was hard to have to tell his brother, Gordon, who was visiting the squadron that day, that Lane was missing.¹ F/O J. D. MacFarlane, earlier in the fray, got a crack at a Me. 109 as a dozen more passed in front of his section. He saw strikes on the port wing and claimed a "damaged". Finding himself alone he dived for the deck and made for home, firing at some enemy soldiers on the beach on the way.

On the next day, while on a sweep, one Canadian

¹ P/O Lane was subsequently reported by the International Red Cross as killed.

squadron ran into about fifteen 109s and 190s, Buckham claiming one FW. 190 as damaged. On the same day at approximately the same time, while escorting Venturas to Morlaix, Powell and P/O A. B. Ketterson attacked two enemy aircraft and were themselves bounced by two others. Powell opened fire on one, closely following and pouring shots into it. At 1,000 feet the enemy plane's starboard wing came off and it hit the sea.

Other similar forays throughout the month were uneventful until the 31st. On that day two Canadian squadrons swept the Belgian coast while Venturas bombed Zeebrugge. Off Nieuport 25 FWs. were seen 500 feet below on the port side diving away. The wing commander and two pilots engaged, with five other pilots getting involved in the ensuing mêlée. At 22,000 feet Norm. Fowlow attacked a FW. 190 from port and astern with a three second burst and then, breaking left, attacked another with a seven second burst. When last seen the latter aircraft was going straight down. Seven thousand feet below, the winco saw a FW. 190 dive vertically past and crash into the sea. The pilot did not bale out and the aircraft was claimed by Fowlow as destroyed. In the same scrap Sgt. Brown was seen to bale out. F/O Fowlow reported:

At the start of the combat we were banking port and being attacked by two FW. 190s. I called Sgt. Brown to bank hard port.

The first FW. 190 overshot him, the second got a burst into him. He slipped slowly to port with thin black smoke pouring from his aircraft. I then saw a white parachute appear about 8,000 feet below in full bloom which I presume to be Sgt. Brown's.

Three other pilots of the squadron heard a debonair "Good-bye" about this time and believed it to be Brown's voice. More than one pilot reported seeing three separate splashes in the sea, just off Nieuport, which were so large as to have been caused only by aircraft diving into the sea.

As the Canadians were the only friendly aircraft in the vicinity at the time, two FW. 190s were claimed as destroyed. Another FW. associated with a brown parachute seen later in the combat was claimed as destroyed and shared by P/Os R. W. Isbister and W. E. Harten and Sgt. D. Small, as these three pilots were the only ones who fired at the time and height to account for the brown parachute seen by the wing commander. S/L J. D. Hall and F/L W. S. Quint each claimed a damaged in this action. Flak was exceptionally accurate and one burst exploded between the wing commander and his number two, F/O J. E. McNamara, at their own height, the latter's aircraft sustaining a hole in the engine cowling.

The first day sweep executed in May produced no results, but on the 3rd four FWs. were bounced as they approached Samer from the south-east at 22,000 feet. Two were destroyed, Boulton and Buckham each claiming one. On the 4th, a sweep in which there were no combats, though one Me. 109 made ineffectual and half-hearted sallies, was memorable for the unexpected appearance of about thirty American Thunderbolts above the Canadians.

On the 13th, Canadian squadrons again formed part of the fighter cover for Fortresses bombing Meaulte. Shortly after crossing the French coast FW. 190s started attacking and as they neared the target, pilots estimated that upwards of fifty FWs. were coming in from all angles. The fight lasted all the way to Le Touquet and three Forts were destroyed. Of the fighters Sgt. W. G. Uttley was last seen in the neighbourhood of Doullens, Sgt. F. W. McKim ditched about fifteen miles west of Le Touquet, and S/L Boulton also failed to return. It was thought that the last two were bounced near Doullens and though nothing was heard from Boulton, McKim was heard to say that he was badly hit. A subsequent air-sea rescue search revealed an empty dinghy. Dowding was in a section that was bounced by four FW. 190s. A Me. 109 attempted to join in, but the Canadian

fired in a head-on attack, striking the cockpit, and the Me. went down in a twisting dive. Half-way across the Channel, Dowding, with F/O R. D. Bowen and W/C Johnson, was attacked by two FWs. One of these was chased into the sea by the three pilots and destroyed. An examination of his camera films resulted in the further crediting of Dowding with a FW. damaged. Lane, who was posted as missing two days later, sighted two FWs. and damaged one. MacDonald attacked the second of two Me. 109s, on which he observed strikes. He claimed it damaged. Hugh Godefroy saw a lone Me. 109 flying below and attacked. The Me. was seen to dive as strikes were scored on its tail and fuselage and was accordingly claimed as damaged.

A sweep on the 14th resulted in a running engagement from Dunkirk to Courtrai. About forty FWs. and Mes. were seen altogether attacking at various times along the route. Buckham shot down one FW. 190 in flames and brought his "destroyed" to four and one-half. Johnson destroyed another on the same foray. Godefroy pressed home an attack on a FW., seeing the cannon mounting and perspex hood come off, following which the Jerry was enveloped in a huge ball of black smoke as though disintegrating. MacDonald dived out of the sun on a Me. 109 and two FW. 190s. He observed strikes on the cockpit, along the fuselage and wing roots of the Me., and chunks flew off. The aircraft was seen to spin into the sea. It makes strange reading, but it is none the less true that the pilots in this encounter took time out to count 25 fishing smacks near Nieuport.

In another sector shipping patrols resulted in action on three occasions. On the 5th, in the Ile de Batz-Ushant area, three small boats and an armed trawler were attacked. In this attack FS E. J. Levesque's aircraft was hit in the cannon magazine and returned to base with a large hole in the mainplane. Two days later, in the same area, a large ship was attacked and left belching smoke. Though there were no indications of an aircraft having gone into the sea F/O L.

W. Jones did not return from this sortie and was not heard from after the attack.

The only ground strafing of the month was undertaken by Powell and F/O H. E. Holbrook. They shot up a camouflaged bus and trailer near St. Pol-de-Léon and then attacked a freight train locomotive, leaving it enveloped in steam and smoke. Powell also attacked an aerodrome hangar and five ground personnel on the perimeter track, causing casualties.

Besides Magwood, Godefroy was also awarded the D.F.C. He was officially credited with two enemy aircraft destroyed and a share in damaging three locomotives. Early in June Buckham was awarded the same decoration for destroying four enemy aircraft and damaging five locomotives. At the same time Boulton and MacDonald were decorated, the former for his low-level attacks and the destruction of four enemy aircraft and damage to three locomotives.

June

In June emphasis shifted from escorted bomber operations to the various types of sweeps with and without bomber formations. This is not to say that the former were not undertaken, but from the point of view of the Canadian fighter squadrons they were less eventful.

Half-mile visibility and a chapter of minor accidents militated against the success of one on the 17th. Three days later twelve Bostons bombed Poix aerodrome with Canadian squadrons acting as escort. Two of the squadrons, serving as support, got involved in an encounter with the enemy. One squadron dived on three FW. 190s a thousand feet below and going in the opposite direction, but was unable to engage. Six FWs. were then seen and a further twelve were reported coming in from behind at 24,000 feet. These were first thought to be friendly, but the mistake was shortly discovered. On turning, it was the second, or cover-

ing, squadron that found itself engaged. McNair, who was acting as wing commander, fired at one of the enemy head-on without seeing any results and, as a second FW. came around, he delivered a halfsecond attack from the starboard rear quarter, again seeing no results. He fired once more and saw strikes all over the cockpit and fuselage: the enemy's undercarriage came down, parts broke off and the aircraft went down on fire. This machine was claimed as destroyed. Other pilots reported that a bright orange flash and black smoke emanated from the under side of an aircraft that was attacked before McNair opened fire, and it was claimed as probably destroyed by F/O F. J. Sherlock. In the earlier phase of this operation one section got separated and, after an attack by one FW. 190, a voice on the R/T said, "I'm baling out; cheerio". This was presumably Sgt. K. D. Windsor, who failed to return. P/O J. C. Elliott also was missing after other pilots of the section followed him down as he half rolled and dived away, apparently suffering from oxygen trouble. Heeney got separated from his section and, finding himself alone, tried to attach himself to a formation that he shortly discovered to be FW. 190s. He dived to ground level and on his way home shot up some freight cars and a flak post. Meantime MacDonald's section, after the loss of Windsor and Elliott, made for the coast but were jumped by a gaggle of twenty FW. 190s. Suddenly MacDonald noticed a 190 which McWilliams had not reported, though it was almost in formation with the section. When McWilliams was told to break he did a gentle turn and was attacked by the FW. immediately. He went into a spin with about eight FWs. going down after him. MacDonald told him to bale out but it is not known whether he did or not. MacDonald then outclimbed the FWs. and returned to base, the only one of the section to return.

On the 22nd, Venturas were out to bomb Abbeville aerodrome with Canadian squadrons as escort. One bomber

was seen to sustain hits and go down and it was thought that a fighter went down in flames, but the Canadian pilots were not engaged.

Sweeps of various types were very frequent. They began on the 1st with a raid on the Doullens-St. Pot area, in which the Wolf Squadron encountered thirty or more enemy aircraft coming up and a general *mêlée* took place. As a result of this action the Wolves claimed a Me. 109 destroyed which they did not attack. Evidently a FW. mistook the Me. for a Spitfire and fired on it from close range astern. The Me. went into a moderately steep dive, crashed and exploded between St. Pot and Hesdin. The squadron claimed this victory on the grounds that by its attack. it had led the FW. to make the mistake. WO A. V. Hargreaves at 10,000 feet saw two FWs. flying in close line astern. He fired and hit the second, seeing strikes on the cockpit. On the return journey Johnson and Bowen attacked the starboard one of two Me. 109s. Cannon strikes were observed on the rear of the fuselage and tail plane and the enemy dived vertically, crashing on the north bank of the Somme.

On the 4th there was a sweep to the Dutch coast. Three "E" boats were successfully attacked, but there was heavy anti-aircraft fire and Ford failed to return. One "E" boat was probably sunk, as it suffered strikes all over its superstructure and debris flew off in all directions. The other two were damaged. WO W. N. Shepherd suffered slight wounds in the face when his aircraft was hit. A similar operation on the next afternoon resulted in a successful attack on an armed trawler and a coaster, both of which were damaged; an explosion occurred and a small fire started aft of the bridge of the coaster.

An uneventful sortie on the 10th was noteworthy by reason of the return to active operations of a Canadian squadron that had been inactive since the middle of May. It undertook two operations the next day but encountered no enemy aircraft, though the Red Indian squadron on the

same afternoon was engaged by about a score of Me. 109s. S/L J. D. Hall attacked one of these and saw numerous strikes on the fuselage and main plane. Pieces were blown off and smoke began to pour from the Me., but as Hall found himself overshooting he broke off the engagement and tried to join a section of Spitfires, only to get himself fired on. He succeeded in forming up with them but soon observed a Me. 109 coming in behind from the port side. He broke off to attack the Me., which attempted evasive tactics, and scored strikes on the Jerry's fuselage. The Me.'s tail assembly broke completely away, and it was last seen spinning down on its back above a field near a farmhouse with the tail assembly following it. The pilot was not seen to bale out.

It was the turn of the Wolf squadron on the 12th, though several other squadrons took part in the operations of the day without incident. Johnson led the Canadians on a fighter sweep for the bombing of targets at Rouen. At Tricqueville six FWs. were seen but no contact was made. Then, south of Rouen, fifteen enemy aircraft were seen below, with twenty more about a thousand feet above them and up sun. As the Canadians set off in pursuit they saw three Me. 109s flying in open vic formation to starboard of the main gaggle about 1,000 feet below. Fowlow's section dived on these, the leader getting strikes on the engine, cockpit and wing of one. The port wing exploded, buckled and broke away and the aircraft poured black smoke as it went down out of control. F/O R. G. Middlemiss attacked the centre of the three as it rolled on its back. He noticed strikes on the belly and starboard wing root but had to break sharply and made no further observations, so could only claim a "damaged". While all this was going on the Canadian squadrons lost sight of the main gaggle and on reforming struck out across the Channel for base.

On the same day another Canadian squadron carried out a shipping reconnaissance off the French coast, sighting



1. S/L R. W. McNair, D.F.C. 2. S/L H. C. Godefroy, D.F.C. 3. W/C K. L. B. Hodson, D.F.C. 4. S/L N. H. Bretz, D.F.C. 5. S/L R. B. Newton, D.F.C. 6. W/C Lloyd V. Chadburn, D.S.O., D.F.C.



1. F/L W. H. Pentland. 2. F/L N. R. Fowlow. 3. S/L F. H. Boulton, D.F.C.
4. P/O Dean Dover.
5. THREE NOVA SCOTIANS: F/L P. T. O'Leary, S/L L. S. Ford, D.F.C., S/L George U. Hill, D.F.C.

about fifty fishing vessels. As they were returning, six FW. 190s flying in line abreast came from behind at sea level and were joined by three more that were above and up-sun. A running dogfight ensued. F/L G. C. Keefer told all aircraft to head for home but Robb (now a F/L) shortly called for assistance. The other Canadian pilots responded to the call, Keefer scoring several strikes on one enemy aircraft. Meantime, according to P/O R. N. Earle, a FW. got on Holbrook's tail and very shortly afterwards there was a large splash in the sea. Earle himself engaged one FW., observing strikes on the starboard wing root and engine cowling. After his attack he flew up alongside the FW., noticing the perspex cockpit cover, which was shattered and came off shortly afterwards. The enemy aircraft was flying very slowly towards the French coast at sea level and was wobbling as though partially out of control, the pilot probably having been hit during the attack.

Two sweeps on the 13th were of some interest. On the first, Canadian squadrons escorted Mitchells to bomb Flushing. About half way home part of one squadron turned back -to help another that was being attacked by more than twenty of the enemy. Chadburn, acting as wing commander flying, claimed one FW. as damaged, Sgt. L. A. Moore claimed a probable and one was claimed as damaged by the squadron as a whole. In the second sweep our pilots acted simply as escort to torpedo-Beaufighters in an attack on a convoy. Three ships, including one of 6,000 tons, were damaged, and one was left listing badly, but our pilots were not engaged.

Two Canadian squadrons were involved in events on the 15th. While carrying out a sweep under the leadership of Johnson, at 24,000 feet, near Rouen, they spotted fifteen FW. 190s in line abreast. One squadron remained as top cover while the other went down. Johnson attacked and destroyed one FW., the pilot baling out. Another fifteen enemy aircraft were then seen upsun on the left, apparently

acting as top cover to the first formation. The wing commander ordered both his squadrons to attack the top cover FWs. and, as they were turning, he himself closed in on and shot down the last one. It exploded and disintegrated. Hugh Godefroy (now a S/L) fired on another and saw it crash N.W. of Rouen. The pilot did not bale out. MacDonald took his section round to the west of this group and picked out one that was 4,000 feet below him. He saw cannon strikes on the root and port wing that caused a large explosion. A big chunk came off the wing root. This aircraft was last seen as it flicked over and over about 10,000 feet lower down. It was probably destroyed. Bowen fired at a FW. that was in a steep turn at 20,000 feet. The winco noticed strikes on this aircraft, pieces falling away and smoke pouring out, and it was therefore claimed as damaged. No losses were sustained by the Canadian squadrons.

Johnson again led the Canadian squadrons in a sweep on the 17th, when they sighted thirty or more enemy aircraft west of Ypres. Johnson led one squadron down to attack the last four enemy aircraft, which were flying line abreast. He himself attacked one, observing cannon strikes on the cockpit and wing roots of the 190. As he was overshooting he gave a final burst, pulling steeply upwards at 16,000 feet. The enemy aircraft began to burn as it spiralled slowly down. Another FW. was seen to spin down and crash and a third was observed at 12,000 feet diving and emitting black smoke. Of these two, the one crashed was thought to be the victim of Phil Archer, the other of F/O J. E. MacNamara, both of whom were missing after the operation. Flying at 21,000 feet, F/O K. P. Marshall saw two FW. 190s closing in on Archer. He was about to yell "Break!" when he himself was hit, so he broke up and to the left. Archer was not seen again, but it is thought that it was his voice which was heard saying, "Baling out". FS G. M. Shouldice saw a FW. fire at Marshall and was coming to his assistance with cannon and machine-gun fire when

his own section was attacked by five or six of the enemy. Shouldice therefore broke to the left without observing the results of his own fire. P/O D. J. Bullock saw a FW. 190 shedding pieces and exuding black smoke as it went straight down. Shouldice was accordingly credited with the destruction of this FW. The score for the day, therefore, was three destroyed by Johnson, Archer and Shouldice, with one damaged by MacNamara, as against two of our aircraft missing.

The next important action took place on the 22nd. Mitchell bombers and escorts went to Rotterdam to bomb the docks, with Canadian squadrons forming part of the escort. Me. 109s and FW. 190s were seen and some attacked. One was shot down by the bombers. Other Canadians escorted the Fortresses on their return from their first daylight attack on the Ruhr, but the enemy did not engage. Later in the day Canadian Spitfires escorted torpedo-carrying Beaufighters in an attack on an enemy convoy of eight merchant vessels and twelve escort ships off Scheveningen. One ship was set on fire, two mine sweepers were damaged, and four other vessels, including one cargo ship of 3,000 to 4,000 tons, were raked by cannon fire.

All the Canadian squadrons of Fighter Command undertook sorties on the 23rd, but not all were engaged. The Germans seemed reluctant to approach. Our pilots fired their guns and one FW. 190 was seen to spin into the ground in the course of operations, but no claims were made.

The next day our fighters were on sweeps to Flushing, Rouen, St. Omer and Yainville. Some pilots were out on no less than three occasions during the course of the day. In the attack on the gasoline dumps at Flushing, intense heavy flak was encountered over the target, but no enemy aircraft were seen. Likewise the simultaneous attack on Rouen failed to provoke the enemy into action, despite ideal weather on both operations. Later in the morning a number of squadrons took part in a raid on the St. Omer freight

yards and this time enemy fighter opposition was encountered. Three aircraft, thought to be Me. 109s, were sighted by MacDonald, but when one section went down to attack, the enemy dived away.

Nearer St. Omer fifteen FW. 190s were spotted, but these also refused to fight. In order to avoid colliding with another Spitfire, MacDonald broke to starboard and on straightening out at 20,000 feet he saw two gaggles of Huns being chased by Spitfires and a third of six FW. 190s which broke starboard and went into a defensive circle. When these six straightened out again and set off in pairs, MacDonald dived out of a steep turn on to the port one of the last pair and gave him a short burst of cannon and machine gun fire from about 150 yards. He observed two strikes on the port wing and, on breaking away, saw the FW. doing a series of lazy rolls downward. 6,000 feet below a parachute opened near this FW., which was therefore claimed as destroyed. Small got separated from MacDonald at the beginning of this action and was not seen again.

In the afternoon of the same day several squadrons participated in a raid on the power house at Yainville, halfway between Rouen and Le Havre. Bombs were seen to fall on and around the target. About forty enemy aircraft, mostly Me. 109s, came up to meet the Canadians, but there were no conclusive results. Three FWs. then hove into sight but declined to engage and two other FWs. watched for stragglers as the bombers and Spitfires returned. Johnson then led his squadrons up sun to attack these two FWs. and, with Buck McNair, dived on them. Apparently the Huns had no suspicion that they were about to be attacked. Johnson saw cannon strikes on one and a large piece fell away from its tail assembly. It spun down and was seen to crash at Valmont. McNair also saw strikes on his opponent and a flash on the cockpit, followed by an explosion as the aircraft went down on its back at a very steep angle. P/O T. J. De Coursey saw two aircraft crash near Fécamp and these

were presumably the two shot down by the wing commander and the squadron leader.

A sweep over Holland on the 25th proved uneventful and another to Abbeville on the 26th was chiefly remarkable for the accident that befell Bowen. In climbing through cloud he collided with Godefroy, whose propeller chewed into the tail of Bowen's aircraft so that the latter was forced to bale out. He broke his arm on landing. Many enemy fighters were seen on this operation but they made only long-range attacks and refused to engage.

The 27th was more eventful. The Canadian squadrons escorted Beaufighters to attack shipping off the Dutch coast. Two Me. 109s tried to protect the convoy but Northcott (now a S/L) gave one a couple of bursts, which literally shredded its wing roots and fuselage. Black smoke poured from the to9 and there was a splash in the sea. At the same time Rae was detailed to take on the first of another pair while Chadburn attacked the second. In the combats that ensued one FW. 190 was destroyed by Rae and Phillip, while Chadburn scored a probable. By now the Beaufighters had finished, their work and a large amount of smoke practically concealed the whole convoy. In an earlier sweep on the same day Johnson had destroyed one of six FWs. that he overtook as they turned away over the Channel.

Sorties on the 28th and 29th proved uneventful but the pilots could not help being impressed by what they saw. To quote one squadron diary:

After one orbit (at the place of rendezvous) the large formation of big four-engined bombers, flying in four boxes of twenty and covered by a huge array of Thunderbolts and Spitfires, appeared dead on time and course. The (Spitfire) wing swept in behind them and covered their withdrawal the whole way back to the English coast. The pilots reported the meeting .. , as one of the most impressive sights they had ever seen, with the sky literally filled with aircraft in the coppery sunshine of evening.

“Throughout the month there were occasional ground-

strafing sorties. Mitchner and Sgt. G. E. McCabe attacked a barge, a 2,000-ton ship and a ferry in Holland on the 3rd, causing damage to all of them. Two days later Powell and Holbrook caused a lorry to blow up, damaged another and attacked a large tank truck and trailer on the Morlaix-Guingamp road, causing both tanker and trailer to explode. They also scored hits on a locomotive. On the 6th, P/Os R. F. MacDermid and F. U. Monette set out on another ground strafing sortie, MacDermid scoring hits on two locomotives, which he left in clouds of steam. At the same time F/O D. J. Dewan and FS H. W. Bowker caused one locomotive to be derailed, another to explode, and a third to be enveloped in steam and its leading freight car, loaded with boxes, to take fire. Three hours later Sgts. F. T. Murray and J. Z. Zabek also left the engine of a goods train enveloped in steam.¹

On the 7th, Holbrook and P/O R. W. Thatcher scored strikes on three locomotives but the last one was trailing two, possibly three, flak cars and Thatcher's aircraft was hit by flak. Holbrook flew alongside and noticed three or four holes in the fuselage but lost sight of his partner when he entered some clouds at 9,000 feet. Thatcher was later sighted in his dinghy and was picked up uninjured, by a Walrus aircraft. Two other pilots, FS E. J. Levesque and Sgt. R. H. MacLean, failed to return.

The next day P/Os D. R. Drummond, R. H. Dose and W. C. Lawrence, together with Moore, went out to strafe ground targets in Holland. Moore damaged a locomotive and Drummond shot up a barge. Dose was last seen going north-west towards the coast and taking cloud cover as flak was encountered. He was posted as missing.

On the 19th Drummond and P/O B. E. Innes attacked a barge in Holland; F/L W. R. Day and McCabe attacked two large barges and a dredge; F/O A. J. Morris and Lawrence

¹ This day was also notable for the fact that F/O L. W. Powell, D.F.C., the noted train-buster, failed to return from a convoy patrol.

attacked a passenger train, Lawrence being heard to call out that he was hit and, again, that he was in cloud, but nothing further was heard or seen of him; L. Foster and F/O D. F. Prentice attacked a shunting engine and three goods trains in Holland.

F/O W. A. Bishop had a miraculous escape on the 6th, when his aircraft took fire. He first prepared to bale out and then decided to try to reach base. He made a wheels-down approach but when about one hundred yards short of the field he hit a row of trees which ripped off his undercarriage and he crashed in a near-by field. His predicament was seen from dispersal and when the tender got near the crash it was discovered that due to the way being barred by barbed wire, a long detour would have to be made. Several pilots climbed the barbed wire with handextinguishers, but Bishop had climbed out of his aircraft unhurt.

July

The weather contributed greatly to the increased activity of Canadian squadrons in July. One indeed boasted, though it was not the only one, that it had participated in twenty-nine operations. Bomber-fighter operations no longer were a major part in the lives of Canadian pilots, but this made no appreciable difference since many of the sweeps were of great magnitude. Indeed, on the very first day of the month, there was a grand sweep across the Channel to Berck-sur-Mer and then inland to Merville and St. Omer. Five Me. 109s were seen and attacked. One dived away and Godefroy engaged the leader of the remaining four, who were flying line abreast. The enemy aircraft pulled up to the right and then to the left but was struck around the fuselage and cockpit. It turned still more and then spun and crashed north-east of Abbeville. Shouldice started firing at the third from the right as it was about to turn its guns on Godefroy. Explosions in the engine followed and pieces fell away from the enemy, then the left

wheel came down and the aircraft went into a spin. Fowlow got behind the second from the right, and obtained strikes all along the engine and cockpit and half way down the fuselage. There were explosions and the engine disintegrated. A score of three, for no losses to our squadrons, was an appropriate way of celebrating Dominion Day.

In the evening of Independence Day, after three uneventful sorties on the preceding days, Canadian squadrons swept into action again. This time a section of one of the squadrons was bounced south of Abbeville by five or more Me. togs. F/O D. R. Matheson got in bursts on the engine and spinner of one which became a casualty. Another squadron reported seeing an aircraft, believed to be a Me. 109F, going down in a steep dive trailing smoke after the engagement. Then it was the turn of another section to get bounced, this time at Amiens, by seven or more Me. 109s which attacked and re-formed three times. F/O J. Spaetzel was last seen in a steep climb and a spiral dive and Sgt. D. H. Stewart suffered a slight injury when his aircraft was damaged. Spaetzel was posted as missing, but Stewart got back to base despite his injury.

On the morning of the 6th there was a sweep over the northern coast of France. Near Poix twelve Me. 109s were seen by two of our squadrons, one of which provided cover while the other dived to the attack. All except one of the enemy dived away. MacDonald fired his cannon at the one remaining, which straightened out from a dive and hits were seen on its fuselage. White smoke poured out and the kite crashed about ten miles south of Abbeville. Then, as the wing flew in towards Amiens, eight or ten Me. 109s were seen coming in at 24,000 feet. About half of them dived away as one of our squadrons climbed to 27,000 feet to get above and behind them. The remainder orbited to the right and were attacked. McNair destroyed one and F/L A. H. Sager damaged another. In the evening of the same day another sweep resulted in an encounter with about fifteen

FW. 190s. Our fighters attacked out of the sun, F/L W. G. Conrad firing at one which turned violently and passed beneath him. Strikes were observed along the wing root and cockpit: the aircraft wallowed, rolled over and went down in flames.

On the 9th there was a sweep from Gravelines to Ghent when some half-dozen enemy aircraft were reported in the Ghent area and nine or more Me. 109s in the Thielt neighbourhood. These latter were engaged and McNair attacked one at 35,000 feet. His windscreen frosted up and, except that it suffered damage, it was difficult to say what was the fate of the 109.

The next morning Canadians acted as fighter cover to American Fortresses as far as Evreux. Twelve or more enemy aircraft were seen flying towards the bombers at 26,000 feet and another twelve at 24,000. One Canadian squadron chased the second group but was unable to close. Eight of the higher group came out of cloud on the other Canadian squadron. McNair sent a section down on these and in the engagement that followed one Me. 109 was destroyed, while Sager and F/O H. P. Zary each damaged another. F/O C. S. G. de Nancrede's aircraft had a bullet in the tail but no serious damage was done. Two Fortresses were seen to blow up and go down in flames, one near Rouen and one west of Bernay. Meantime other Canadian squadrons went as close escort to Venturas attacking targets at St. Omer, with B. D. (Dal) Russel, D.F.C., a veteran of the Battle of Britain, flying for the first time as a wing commander. The bombers were seen to obtain accurate hits on the target and to start a large fire in the assembly shop.

Bastille Day produced two sweeps in which Canadian fighters escorted Fortresses and Bostons in raids on targets near Paris and Abbeville respectively. While escorting the Fortresses towards Paris nine Me. 109s were seen at 20,000 feet heading for the bombers in line abreast. As the Spitfires turned to ward off the attack another nine turned in

behind the Canadians, while a third section of nine dived straight at the bombers. One bomber was seen to be on fire and two others crashed near Louviers, while one Me. 109 was blown up by fire from the Forts. As the Americans were being escorted back, the Canadians were bounced by FW. 190s and Me. 109s. F/O C. A. Graham took violent evasive action and shook off four enemy aircraft, after which he shot up a gun post on the way home. P/O M. Quinnie damaged a Me. 109.¹ About the same time as these events were taking place, other Canadian squadrons were going over what they had now come to designate as "the milk run"-the well-worn track to Abbeville. Sixteen Bostons were escorted there and back. Bombing was accurate but no enemy aircraft, ships or flak were seen.

The 15th witnessed three operations with a certain amount of action on all of them. In the late afternoon Bostons were sent out to bomb the aerodrome at Poix. Flak punctured holes in the wings and radiator of F/O H. E. Hamilton's aircraft but he was able to get home in safety. On turning away from the target a score of FWs. made a determined attack. The assault was beaten off, but not before one persistent FW. had set fire to the engine of one of the bombers, which, however, got back safely. The persistent FW. suddenly found itself assailed by a host of Canadian pilots. S/L G. C. Semple inflicted some damage and it was also attacked by Neal, F/O D. F. Kelly, Ibbotson (now a F/L) and three other pilots. Kelly's aircraft was hit in the fuselage and propeller by stray bullets, but he returned safely. Another afternoon sortie resulted in the sighting of eight enemy aircraft south of Abbeville. All but two of these disappeared as the Canadians got into position up-sun, from which point Johnson attacked and destroyed the lower. MacDonald attacked the other three times. On the second attack the enemy aircraft half-rolled to port and

¹ W/C Chadburn also attacked an enemy aircraft and claimed it as probably destroyed.

dived. On the third attack it suffered strikes on the wing-tip, fuselage and cockpit, and then went into a straight dive and crashed. Three other FWs. hove into view but scuttled away before being engaged. A late evening show resulted in the sighting of a few enemy aircraft and some shooting, but no claims were made.

Practically all the Canadian squadrons took part in a do on the 16th, which was memorable for being the first operational venture of the U.S. 8th Air Force Air Support. The objective was the freight yards at Abbeville, with sixteen Marauders undertaking the bombing. Stiff enemy reaction was expected and seven or more FW. 190s bounced the escort cover promptly, but without effect. Other Canadians were engaged by as many as twenty FWs., but no claims were made.

An effort to locate a convoy on the morning of the 18th failed because the convoy had put into harbour, but in the afternoon Canadians escorted Beaufighters right up to the quay-sides where the ships were sheltering under an umbrella of Me. 109s. Chadburn saw one Me. 109 crash into the sea just before he led an attack on another. He obtained strikes on the wing root, engine and cockpit of this aircraft which immediately belched smoke and went into an uncontrolled roll. Rae then gave it a burst and it crashed into the sea. Two Beaufighters were lost on the operation, but one R.A.F. squadron claimed three Me. 109s in addition to those claimed by the R.C.A.F.

There was action, too, on the 19th, and for one squadron at least it was important. For six months they had not been able to claim a single destroyed, but on this day were able to chalk up their fiftieth. As the Canadian squadrons were crossing the Channel three enemy aircraft, approaching in line abreast some 2,000 feet below, changed course when they sighted our aircraft. Two sections were sent to cut them off. They broke, two Me. 109s to port and a FW. to starboard. One of our sections attacked the Mes., one of

which was probably destroyed by Bowker, who left it pouring smoke in a shallow dive 200 feet from the ground. The FW. was destroyed by the combined efforts of Ian Ormston, FS K. B. Woodhouse, F/O R. K. Hayward and Sgt. D. M. Wilson, the first of whom must have totally incapacitated the German pilot, since he made no effort to take evasive action. The Jerry was last seen disappearing behind a large chateau from which it did not emerge. A large bluish-white flash was observed on or near the ground at just about the same time.

Following two uneventful sorties—a morning shipping reconnaissance and an escort to Mitchells bombing Rotterdam on the 25th—a number of other Canadian squadrons participated in an attack on St. Omer, but this, too, was uneventful. In the evening Boston aircraft bombed the aerodrome at Schipol, where the Canadian pilots ran into some opposition. A number of enemy aircraft were seen, three of them having Italian markings on the fuselage. Johnson destroyed a Me. 109 which was later seen burning on the ground.

On the late afternoon sweep on the 27th Keefer's engine packed up over the Channel, forcing him to bale out. He was picked up later unhurt. In the evening there was a raid on the aerodrome at Schipol during which thirty or more enemy aircraft were engaged. Mitchner destroyed a Me. 109, S/L F. E. Grant destroyed another, Chadburn probably destroyed a third, Walker damaged one, while Sgt. G. F. Burden damaged two more.

One expedition with Fortresses was chiefly remarkable for the adventure that befell Buck McNair. Shortly after noon, while flying at 20,000 feet off Knocke, his engine failed and he turned for the English coast, accompanied by P/O T. Parks. McNair's aircraft lost height and, when about twelve miles off the French coast, caught fire, went out of control and dived for the sea. The squadron leader baled out at 5,000 feet, his parachute opening at 2,000 feet. Parks

gave a mayday for him and for an hour and a half orbited the spot where the squadron leader had gone in. Meantime the squadron, at the conclusion of the operation, refuelled and took off immediately to participate in the air-sea rescue of their leader. They saw him picked up by a Walrus aircraft, which they escorted back to England. Buck was burned about the face and had had a close call. Parks had put on a really good show and all was well.

Marauders and Fortresses got off to an early start the next day, Canadians accompanying the former. Soon after crossing the coast near Zandvoort, enemy aircraft were seen below and one squadron was detailed to go down and attack. Johnson fired on a Me. 109 which, hit in the cockpit, began to stream black smoke. The action was broken off because of the presence of other enemy aircraft, but this one machine was claimed as damaged. At this point a FW. 190 was seen in pursuit of two Me. 109s and P/O K. R. Linton was detailed to engage the FW. while the rest of the squadron covered him. Linton dived and shot away the top of the enemy's rudder and punctured his fuselage and wings. Following this the Jerry burst into flames, half rolled and dived straight down, crashing southwest of Schipol aerodrome. About the same time two Me. 109s were spotted 5,000 feet below. Fowlow (recently promoted to F/L) attacked one which crashed southwest of Amsterdam. Sgt. N. B. Dixon attacked the other, but his reflector sight failed to function and he could claim only a damaged. Fowlow and Dixon were then bounced by about eight Me. 109s. Dixon was attacked by three or four from astern and received hits on his right wing. He dived to 5,000 feet and saw three fires caused by blazing aircraft within a radius of about five miles. While on his way home, still being chased by one of the Me. 109s, Dixon saw another fire caused by a burning aircraft beside a lake near the coast.

Another section of our aircraft saw three Me. 109s in the area south-west of Amsterdam and went down. Two of

the enemy half-rolled and dived but a third, continuing on its course, was shot down in flames by Harten. This was the aircraft seen by Dixon. P/O J. E. Abbots and F/L D. Goldberg were bounced by enemy aircraft in the same neighbourhood and Abbots was not seen again. He was posted as missing. The day's score was two Me. 109s and one FW. 190 destroyed and two Me. 109s damaged, to one Spitfire missing and another damaged.

The 30th opened with a morning attack on the aerodrome at Schipol. After the bombing two aircraft were seen 6,000 feet below, about seven miles behind. Believing there were more, Johnson took one of his squadrons down and found at least six. The wing commander attacked one of the original pair of Me. Logs, causing it to dive downwards. It tried to climb and the wing commander noticed that both its wheels were down. Shouldice continued the attack on this aircraft and shortly saw the pilot take to his parachute. Since it was not clear whose fire had destroyed this aircraft it was claimed as shared by the wing commander and the flight sergeant. Meanwhile F/O J. F. Lambert and Goldberg had dived on the other of the original pair. It dived, rolled and dived again with the Canadians on its tail and Lambert giving it several bursts. It crashed and was claimed as destroyed.

F/L H. J. Southwood, owing to the windscreen fluid tank discharging nearly all its contents in the cockpit, lost sight of the wing and found himself north of Amsterdam at 10,000 feet. As he cleaned off the windscreen he recognized a Me. 109 coming towards him below and ahead. He attacked and then, coming in from the rear, caused the enemy's undercarriage to drop and black smoke to cover the tail plane. The Me. then spiralled down to the right, trailing black smoke. As Southwood had by this time used up all his ammunition he was unable to continue the attack and claimed the aircraft as damaged.

The last day of the month saw Marauders bomb Mer-

ville aerodrome with Canadians as escort. A dozen Me. logs were seen about 6,000 feet below and were at once attacked. Linton probably destroyed one of them as he saw strikes on its cockpit and it was last seen trailing black smoke at 3,000 feet.

There were a few scrambles during the month, but like the shipping reconnaissance sorties and patrols they resulted in no action, while air-sea rescues were intermittent and usually uneventful. However, as in the case of the rescue of McNair, there was a deep personal interest in this kind of work and, though there was little action, they were not without their moments. For instance, on the 27th, just a day before McNair's adventure, a search was carried out for Keefer, who had been forced to make a parachute descent five miles off the French coast. Some of our aircraft were forced to turn back due to bad weather coming in over the Channel. However, later in the evening, Keefer was picked up by a Walrus aircraft from an air-sea rescue squadron. Again, on the 25th, another squadron made searches for S/L E. F. J. Charles, D.F.C. and Bar, holder of the American Silver Star, a Canadian in the R.A.F. The first was unsuccessful but the second Walrus expedition resulted in a rescue.

Among items of interest at this time was the news that F/L D. R. Morrison, D.F.M., was not dead but a prisoner of war. He was in hospital in Germany recovering from a leg amputation and severe burns. He had been awarded the D.F.C. early in the month.

Awards were made to a number of Canadian fighter pilots besides Morrison; Jackie Rae, who had completed sixty sorties and destroyed two enemy aircraft; Keene, who had made 73 sweeps over enemy territory, and Keltie, who had a total of 75 sweeps and had frequently led his squadron. McNair was awarded a bar to his D.F.C. at the end of the month. Hodson was awarded an American D.F.C., as was Buckham.

August

The story of operations in August is one of fighter escorts to bombers attacking airfields and other targets at such places as St. Omer, Abbeville, Bernay, Poix, Caen, Lille, Merville and Tricqueville. Nothing particularly eventful took place on those sorties that were made in the first eight days of the month, but one sweep on the 9th resulted in the loss of P/O R. T. Heeney, whose engine failed fifteen miles north-west of Calais.

The 12th was an active day. A raid on Rotterdam produced a short engagement near Ghent in which Phillip attacked and damaged a Me. 109. As the squadrons were returning to base the same officer went to investigate a strange aircraft that turned out to be another Me. 109 which he also damaged. When it was observed that one group of bombers was unescorted and that Me. 109s were attacking them in pairs, Johnson and Wally Conrad went to the rescue and shared in the destruction of one Me. 109 and the damaging of another. About the same time other squadrons were escorting Marauders to Poix. F/O H. R. Finley had to bale out on the return journey owing to a shortage of fuel. He was orbited by P/O L. G. D. Pow until picked up by an air-sea rescue launch.

On the 15th during a sweep F/O P. G. Johnson damaged a FW. 190 south of Flushing. In the afternoon a fighter sweep over Brest caused a mix-up with a few small formations of enemy aircraft and hits were claimed by F/L O. M. Linton and P/O A. E. Gray.

The next day there were raids on Tricqueville, Ypres, Bernay, Le Bourget and Beaumont-le-Roger. Only one of these produced any excitement for our fighters, when, in the late afternoon, while Canadian pilots were acting as close escort to Marauders attacking Bernay, Me. 109s and FW. 190s appeared on the scene. P/O R. D. Booth fired head-on at two Me. 109s and Pow at a FW. 190, but they failed to observe the results of their attack. Chadburn, how-

ever, claimed one FW. as damaged.

There was much activity on the 17th, but only one squadron got into an action that showed tangible results. Acting as cover to Fortresses withdrawing from a mission to Schweinfurt, Ghent and Bergues in the early evening, the pilots sighted a Me. 110 which was destroyed by Johnson, Dover (now a F/L), Foster and F/O J. Preston. A FW. 190 was also sighted and destroyed by Conrad and Shouldice. Near Bergues, Conrad's aileron and tail unit came off and he was last seen in a steep dive. Shouldice also lost an aileron but managed to get back almost to Dover, when his machine got out of control and he too was last seen in a steep dive. F/L Conrad had just that day been made O.C. of his squadron and FS Shouldice's commission had come through at the same time; Conrad later was found to be safe.

Operations on the 18th were uneventful, but the next day there was action again. In the early afternoon a dozen or more Me. 109s were engaged as a fighter sweep was returning from the Abbeville area. F/O A. E. Fleming damaged one but P/O F. C. Joyce who, like Shouldice, had just been commissioned, failed to return.¹

In the evening, as bombers were being escorted back from Flushing, another group of twelve Me. 109s was sighted and two were destroyed. One of these was shared by Dowding and F/O T. A. Brannagan and the other was shot down by Dover.

No action of any importance took place again until the 22nd, when our fighters escorted Marauders to Beaumont-le-Roger. Shortly after leaving the target area eight FWs. made a head-on attack. Northcott² attacked the leading en-

¹ One squadron credited another with a "destroyed" in this action but the squadron so credited made no claim.

² S/L G. W. Northcott was awarded the Distinguished Flying Cross during the month. He had completed fifty-five operational sorties during which he had destroyed three enemy aircraft and damaged several more. He had also participated in several effective attacks on shipping.

emy aircraft and destroyed it while Simpson damaged another. The next day, our fighters while on a sweep in the Béthune area engaged twelve Me. 109s. Johnson destroyed one and Middlemiss damaged another without loss to our squadrons.

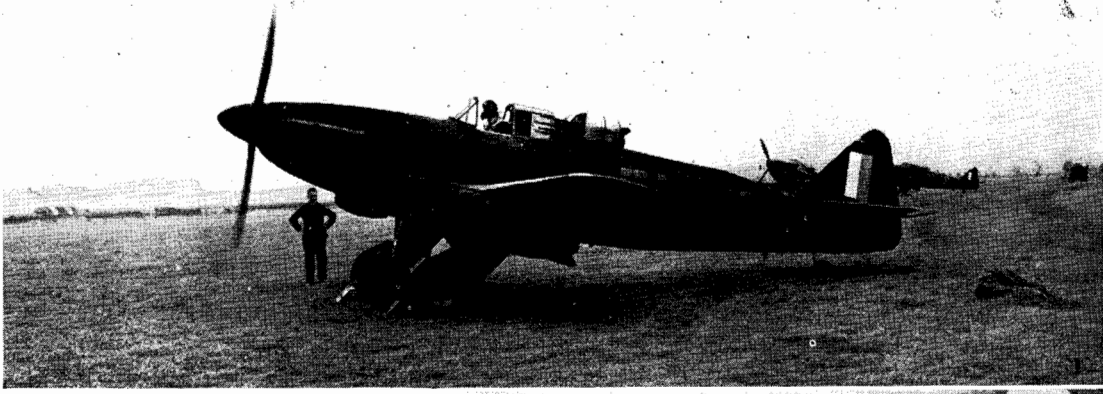
The 24th was uneventful, but on the next day an operation over Beaumont-le-Roger resulted in a number of FWs. being bounced by our squadrons, P/O P. A. McLachlan destroying one.

On the evening of the 26th Johnson led a fighter sweep over Tricqueville, Rouen and Caen. About fifteen FW. 190s and Me. 109s were engaged, when the winco destroyed a FW. near Caen. One section frightened a FW. 190 into firing at and destroying a Me. 109 which was claimed as destroyed by P/O W. F. Cook. Several other combats were inconclusive, due to cloud conditions, but it was thought that at least two more enemy aircraft were damaged, if not destroyed.

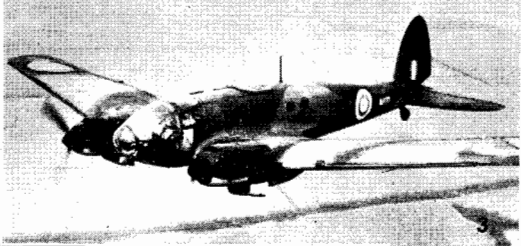
Operations on the 27th and 30th were not characterized by any conclusive combats, but the month was rounded out with a raid by Fortresses over Belgium on the 31st. When our aircraft were ten miles south of Ghent one squadron bounced five Me. 109s out of the sun and destroyed two, one falling to the guns of McNair, the other being shot down by Phillip.

At the beginning of the month fighter squadrons were engaged in an attack on a convoy. Two squadrons escorted Beaufighters on the 2nd; an R.A.F. squadron attacked two Me. 109s off Den Helder and probably destroyed one. Then the Canadian pilots saw four Me. 109s in two sections of two near the rear of the convoy. Chadburn,¹ and Pow shared in the destruction of one of these, whose pilot was

¹ W/C L. V. Chadburn, D.F.C., was awarded the Distinguished Service Order in September. He had destroyed six enemy aircraft and had successfully attacked three E-boats, completely destroying one of them.



1. A Boulton-Paul Defiant Night Fighter. 2. W/C R. C. Fumerton, D.F.C., and F/O L. P. S. Bing, D.F.C., display the Iron Cross from an enemy bomber which they shot down over England. 3. A Blenheim makes a successful attack on enemy shipping.



1. F/O T. H. Donnelly, D.F.M. 2. FS W. J. Porritt, D.F.M. 3. Captured Heinkel 111 with British marking. 4. F/O N. B. Williams. 5. F/O E. F. Paige, D.F.C., and W/C A. C. Brown, D.S.O., D.F.C. 6. Captured Ju. 87 Stuka.

seen to bale out. Rae attacked another and saw a brilliant red flash come from the enemy aircraft as it halfrolled and crashed into the sea near the beach. One motor vessel of about 2,000 tons, in the centre of the convoy, was hit by a torpedo, as also were one "M" class minesweeper and an escort vessel. Another escort vessel was left on fire. Altogether a very successful day.

An air-sea rescue on the 4th was notable among others for the sighting of the pilot of an Albacore. Fixes were given and he was rescued from his dinghy about twenty miles off Cherbourg.

CHAPTER VI

CONVOY PATROLS AND INTERCEPTIONS

THE extent to which shipping has been free to move in the waters surrounding the United Kingdom, despite the fact that these vital avenues of supply are within easy range of enemy aircraft, is a tribute to ceaseless and effective air protection. The Sunderlands, Catalinas and Liberators of Coastal Command, operating in close cooperation with the Royal Navy, have as their primary duty the patrolling of the more distant approaches to the British Isles, on the lookout for enemy surface and submarine raiders. Wellingtons, Whitleys, Hudsons, Hampdens, Blenheims and Beaufighters-the latter two, longrange fighters-look after the medium range patrols. But nearer home, along the eastern, southern and south-western coasts, where the shipping is within easy reach of the Dormers and Junkers, the fighter boys take over the responsibility and send out patrols throughout the day to watch over the slow-moving freighters and their naval escorts. On some stations, this is the principal activity of the fighter squadrons while the pilots are resting after a period of more strenuous service flying or while new pilots are being given their final training before taking part in operations over enemy territory. But even squadrons in the actual front line of the air engage in these defensive patrols in addition to their offensive sorties and sweeps.

Fighters as Convoy Patrols

After the excitement and action of a dogfight high over Abbeville or a low-level attack on a flak post at Furnes, the fighter pilot is prone to look upon convoy duty as a tedious and thankless assignment, completely shorn of the glamour surrounding his regular activities. For like the anti-submarine patrols of Coastal Command, the efficiency of the convoy patrol is not judged in terms of Nazi bombers destroyed, but rather by the number of ships escorted *untacked* to their destination. The very monotony of the work—the failure of enemy aircraft to appear—is paradoxically the surest proof of its success. For the Spitfire pilot, however, that is but small consolation as he “flies-in the hours” searching the sky for an unwary Dornier.

To relieve the monotony and to impress on them the importance of the work, liaison trips are arranged on destroyers escorting convoys on which pilots make brief excursions, so that they may see for themselves the part they play in this never-ending task of delivering supplies. To many, the voyage has been but a pleasant sea holiday—albeit in rather cramped quarters—but to others, thanks to co-operating Nazis, it was a thrilling experience of dodging bullets, bombs and cannon shells.

But occasionally pilots on convoy patrol have the satisfaction of meeting up with a Dornier or a Junkers and getting a few moments’ excitement. In such case, the pilot has the added incentive of knowing that, in the crews of the surface ships, he has a watchful and admiring gallery. Normally the pilots work in pairs, one team relieving another so as to maintain a continuous patrol over the ships. The most dangerous periods are at dawn and dusk, for it is then that raiders take advantage of the uncertain light to creep up on their prey unannounced. The same is true of days with heavy overcast, for then the clouds provide cover for the approaching raider—and safe haven in which he may seek refuge if pursued by defending aircraft.

R.C.A.F. fighter squadrons have shared in this task and during thousands of hours' flying on convoy patrols or scrambles our pilots destroyed four raiders, damaged at least ten and chased many more, in their first year at this work.

On June 26th, 1941, Sgt. G. D. Robertson left his base in company with his flying mate to carry out a dawn patrol over a convoy off Lowestoft. As they approached the ships they noticed anti-aircraft fire ahead and then sighted two enemy planes, one of which dropped a bomb near a merchant vessel. The pilots closed in on the raider, a Junkers 88, and Robertson attacked from the rear as the bomber dived to sea level. Despite intense return fire from the enemy rear gunner, he continued his attacks until he had exhausted all his ammunition. The Junkers disappeared in the distance with white smoke belching from its fuselage.

Robertson's combat is typical of the actions fought over coastal convoys. Decisive results, in the sense of confirmed destruction of enemy aircraft, are relatively few because the German bombers, wise from bitter experience, seldom approach their prey in daylight unless the overcast affords them opportunity of a surprise attack and immediate cover in the event of pursuit. In November 1941 this cloud cover played an important part in four engagements between R.C.A.F. pilots and enemy convoy raiders, in three of which the clouds probably prevented the combats being pressed to a decisive conclusion.

On the fourth occasion, Boomer, while on dusk patrol off the Lincolnshire coast, intercepted a number of enemy raiders approaching under cover of low-hanging clouds. In spite of the failing light, Boomer chased one of the Junkers 88s in and out of clouds, finally got his guns trained on it and setting its starboard engine on fire had the satisfaction of seeing it fall in flames.

If for no other reason than morale, the encounters of November had a heartening effect upon our pilots and they

continued their tiresome duty with more enthusiasm-but it was many weeks before a similar set of circumstances arose and the fighters had another chance at raiders. And, oddly enough, when they did November was more or less duplicated in that several engagements took place within a day or two.

After a busy period over northern France, one Spitfire squadron was moved to another station for a rest. During the first two weeks of May 1942 the pilots carried out convoy patrols day after day, without seeing the vestige of an enemy; hour after hour the sections took off, flew up and down their allotted line of ships, and returned to their base with "nothing to report". Again, on the fifteenth of the month, the routine was repeated and at 1600 hours Dick Ellis (then a P/O) and another P/O, J. D. Stevenson, took off to relieve their predecessors escorting a ,convoy along the east coast. For thirty minutes they, too, patrolled up and down below a heavy bank of clouds. Their time was almost up; already they were on the watch for their relief. Another Joe job (air force slang for an unpleasant duty) was almost over-but not quite. Suddenly their radio crackled-two bandits were reported in the immediate vicinity. Gone was all feeling of wanting to get home. Left was only an insurmountable desire to be "up and at 'em". And just then an aircraft broke cloud some four miles away, at the head of the convoy. Both pilots gave chase and quickly overhauled the Dornier 217. Ellis had his guns trained on the enemy first, but the Do. took vigorous evasive action and dived toward the sea. Ellis's ammunition all expended, he broke off and Stevenson took on the fight, firing three bursts into the bomb-laden Hun, which was now at sea-level with one engine smoking. As a last resort the Nazi jettisoned his bomb load, but to no avail, for a moment or so later he tipped over into the sea. Ellis took a ciné-gun film of the sinking bomber before it disappeared. No survivors were seen.

On June 11th, Flight Sergeants S. A. Taylor and J. R. Mowbray, from another of the newer R.C.A.F. fighter squadrons, were credited with the destruction of a Ju. 88; and a fourth was shot down on July 11th by Phil Archer, of still another unit, who had already destroyed three enemy aircraft while serving with an R.A.F. unit. While guarding a convoy off the Suffolk coast, Archer noticed a Do. 217 approaching from the east. As the enemy altered course and climbed into a cloud, Archer turned and followed, climbed above the raider and then dived with cannon and machine-guns blazing. The Dornier's port engine caught fire, the pilot jettisoned his bombs and finally the aircraft crashed in the sea a seething mass of flame. One of the crew baled out. For this, his fourth victory, Archer was awarded the Distinguished Flying Cross.

Defence Against Low-Flying Raiders

But the fighter squadrons have still another defensive function—the protection of the south coast of England from attack by low-flying raiders. In the summer of 1942 the Luftwaffe adapted some of its Focke-Wulf 190 fighters to carry bombs and used them to make hit-and-run attacks on coastal towns and encampments. Skimming across the Channel at sea level, they were sometimes able to approach unseen, swoop down on a town, drop their bombs, machine-gun the streets and skitter away again before the full force of the ground defences could be brought to bear. In an endeavour to meet this new type of attack, defensive patrols of fighter aircraft were maintained off the exposed portions of the coast.

One Canadian fighter squadron has carried out many such defensive patrols and scored several decisive victories in quick succession. On August 1st, 1942, a standing patrol encountered two wave-skimming FW. fighter-bombers flying towards Brighton and G. G. Davidson, now a Pilot Officer, a member of the patrol, approached them unseen and

shot one into the sea, where it exploded as it struck. He then turned his attention to the second, on which he expended the balance of his ammunition. Pieces were seen to break off the FW. as it jettisoned its bombs and fled precipitately.

Occasionally, long-range bombers attempt these hit-and-run raids by using any existing cloud cover to mask their arrival. They, too, are treated with little ceremony by our fighters, who pursue them up to and through the clouds. Just a day or so after Davidson made such short work of the FWs., P/O J. S. McKendy and FS T. C. (Rusty) Gates, on an interception patrol, spied a Do. 217 through a break in the clouds over the Channel and dived on it with all guns blazing. After the first burst the Do. promptly jettisoned its bombs and dived for cloud cover-but the Spitfires clung to their victim. Despite the intense evasive action of the enemy, they attacked again and again, all the while chasing the Hun down closer to sea level. As McKendy and Gates wheeled away after one final burst, the enemy hit the water and all that remained to mark the grave of the raider was a large oil slick.

The Nazis also send long-range aircraft, usually at dawn or dusk, to make weather and reconnaissance flights over Britain, to report ship movements and to scout for convoys, news of which they pass along to their more war-like squadrons for attention. These reces, carried out in failing light, are most difficult to spot and test all the powers of observation of our pilots. R.C.A.F. fighters have had a number of brushes with these wily fellows during the course of which they have destroyed two and damaged several others. On July 17th, FSs Richards and Thompson, Spitfire pilots, sighted a Junkers 88, doing a dawn reconnaissance patrol off the Isle of Wight, and quickly closed on their prey. Six times they attacked the snooper from the rear, using all their ammunition and observing strikes all over the enemy aircraft but eliciting little return fire. The

pilot took no evasive action and soon the gunner ceased to answer the Spitfires' hail of lead-but still the Ju. flew straight on. One of the pilots, wondering at the lack of evasive action and the absence of return fire, overtook the Ju. and flew alongside at a distance of about ten feet. There were cannon holes all along the fuselage, in the wings, the engine nacelles and the tail; the rear gun position was almost a total ruin and the gunner was slumped over, his head covered with blood. It was all too evident that the crew were dead-and the Junkers was flying itself. The enemy was later confirmed as destroyed.

Just two weeks later Spitfire pilots of another R.C.A.F. squadron destroyed a second enemy recce plane, when two of our fighter boys were scrambled to investigate a suspicious craft flying at a low height over the Bristol Channel. With no delay and beautiful precision they shot the Ju. 88 down into the channel, where it sank immediately, leaving no survivors. This was a particularly pleasant victory, since the Ju. was a regular visitor, which had made almost daily excursions to the district.

CHAPTER VII

NIGHT FIGHTERS

IT is doubtful if any phase of aerial warfare has developed to such a great extent as night fighting. Twenty-five years ago, when night fighters were first organized to defend the skies of Britain against Zeppelins and Gothas, they faced three great problems: (a) how to locate the enemy in the almost limitless expanse of the night sky; (b) how to keep contact until within effective range for attack, and (c) how to find their base again. Their dilemma has been compared to that of the man, armed with a baseball bat, attempting to kill a fly in a darkened room aided only by the beams of a few flashlights.

The menace of the night raider in this war is much greater than it was in 1918, but defences on the ground and in the air have kept pace and night fighting has now become a highly developed art to which science has contributed instruments of amazing efficiency. Today, when enemy bombers are reported approaching the coast, the night fighter crews waiting in the dispersal huts are scrambled to intercept the raid. From the time of leaving the ground until they make contact with the enemy they are directed by radio to the area and height at which the bandits are flying and following the contest are again directed to their base. Success in night fighting not only requires carefully trained air crews but also the closest co-ordination between air ac-

tivity and ground control, in which the radio telephone has played an important part. Many other, equally important, aids have been introduced to improve the efficiency of the night fighter. Since sight, or in the terms of the air force, night vision, is of paramount importance, numerous plans have been brought into effect to accustom the eyes of the night fighter crews to the darkness in which they fight. The fact that they work by night and sleep by day, thereby losing the health-giving rays of the sun, has also been taken care of. All in all, the proof that the forward steps of science have aided this most specialized art is to be found in the increasing number of enemy bombers brought down by our fighters during night attacks on Britain, Malta, and Egypt.

The success of night fighting, however, can not be gauged solely by the number of enemy raiders shot down, though this number is considerable. When an enemy aircraft is plotted or even sighted it is not always possible to engage him in combat. Sometimes the bomber, aware that he is being closely shadowed, may throw off pursuit by taking violent defensive or evasive action. Frequently in such cases the enemy pilot jettisons his bomb load in his endeavour to escape, so that the night fighter, even though he may not have been able to bring his guns to bear, can consider his sortie as partly successful in that he has prevented the raider from attacking the target.

R.C.A.F. night fighter squadrons were organized in May and June 1941, and since that time have shared in this important phase of the work of Fighter Command. During the early part of the period covered by this narrative night fighters were equipped with Blenheims or Defiants and then changed to the Beaufighter—a twin-engined mid-wing monoplane with either Hercules or Merlin engines, carrying a crew of two and equipped with four Hispano cannon and six Browning machine-guns. In the course of a year, from the date of their becoming operational until August 1942,

R.C.A.F. night fighter squadrons were credited with the destruction of eighteen enemy raiders and the probable destruction or damaging of many more. And this without the loss of one of our fighters due to enemy action in the air. Since that time the score has mounted, though the purely defensive role they once played limited the number as Hun raids became less frequent. More recently Mosquitos have joined the Beaufighters and our pilots have added offensive operations to their earlier defensive duties.

The activities of a night fighter squadron, like those of the enemy hit-and-run night raiders, rise and fall approximately with the phases of the moon, so that almost all our victories have been won during the full moon period. While moonlight assists the enemy, it also makes him a visual target for our patrolling fighters.

The first R.C.A.F. night fighter squadron victory was won by F/O R. C. Fumerton and his observer, Sgt. L. P. S. Bing, during the full moon period at the beginning of September 1941. They intercepted a Ju. 88 which was attempting to attack the Tyneside and stalking the raider from cloud to cloud finally dived and opened fire before the Hun had any idea that a night fighter was in the vicinity. The first burst, fired from behind and below the Ju. at only 50 yards range, set the starboard engine afire and raked the fuselage from stem to stern. After a second attack the enemy aircraft exploded in mid-air and fell in flaming pieces.

Six days later, on September 7th, Fumerton and Bing again intercepted a raider and got in two bursts of cannon fire. However, conditions were not as conducive to success and the raider escaped in the clouds. Fumerton and Bing were later posted to a squadron in the Middle East, where they continued their series of night victories in defence of Egypt and Malta. On two occasions they destroyed two bombers during a single night. These two Canadians, with a final credit up to August 1942 of at least 10 enemy aircraft, were the leading team of R.C.A.F. night fighters and both

were decorated with the Distinguished Flying Cross. Fumerton has received a bar to his D.F.C.; Bing is now a Flying Officer, and lately qualified as a pilot.

Bing's own description of night fighter work follows:

Night fighting is a specialized form of aerial warfare unlike any of the other branches of the Service. It calls for high efficiency on the part of the pilot and observer and a great deal of co-operation both within the crew and between the crew and the operations controller on the ground.

The night fighter squadrons, equipped for the most part now with the Bristol Beaufighter, a twin-engined, mid-wing monoplane armed with four 20 mm. cannon and six Browning machine-guns and manned by a crew of two, pilot and observer, go on duty at sunset as the day fighters return from their day's work. During the night, if they are in a busy sector, the squadron will probably fly a couple of patrols-patrolling back and forth in a specified area for three or four hours looking for night raiders who may be tempting fate by entering the sector. If a raid develops, then two, possibly three of the night fighters will be scrambled to intercept and destroy as many of the enemy as possible.

The work of the night fighters may best be illustrated by taking a fictitious night with a squadron-any squadron in a busy sector.

The night flying tests have been completed in the afternoon and the ugly black Beaufighters are squatting around the dispersal area looking for all the world like big black toads. They are all on "top line" and have been gone over and over and over by the ground crews, who take a great pride in their particular aircraft and endeavour to have it the best one on the line. A truck comes rumbling around the perimeter track as the sun is sinking, and decants the crew of the duty flight, who make a rush for the best chairs in the dispersal hut. A few minutes later the phone rings and the operations controller, at "Ops." some miles distant, puts the squadron on readiness and passes on any bits of "gen" the boys might be interested in, such as weather reports, height and position of balloons. He also gives the readiness state, that is, the number of aircraft required for "readiness"-immediate take-off-the number for "stand by"-30 minutes take-off-and replacements at an hour.

The moon is coming to the full and everyone is expecting a raid while it is bright moonlight. There is a lot of bickering back and forth about who will be first to scramble when the call comes, but the flight commander settles all arguments by producing a roster he has worked out showing the order of take-off for everyone. The boys settle down to

reading, playing cards or the gramophone, just relaxing in readiness for the scramble, if and when it comes.

Suddenly the phone rings, the first readiness crew jumps up just in case-Yes! it is "Scramble one Beau"-the crew dashes out, starts up and is off in a few minutes. Meanwhile, those left behind have 'phoned the controller to get the story of the raid, where it is, how many raiders and how far away. The second crew is ready to go at a moment's notice and as the raid builds up the phone rings again, "Scramble a second Beau!". The second crew is off with a roar of powerful motors.

The first Beau has by this time climbed to the height of the raid and is being directed towards the raider that has been selected as the first victim by the controller. The night fighters are in direct radio-telephone contact with the controller and receive their orders and directions from him. The raid has really begun now searchlights weaving and coning over the target area are stabbing here and there after the enemy. The flashes of the ack-ack guns, followed by the bursts in the air, are thick and fast, the Bofors guns are going into action, their pretty but vicious strings of red tracers, known as "flaming onions" curving upwards into the night. As the night fighter closes in on the enemy over the target the controller has the guns stop firing, though frequently the night fighter takes equal chances with the Hun, flying through his own ack-ack.

Suddenly the fighter sees the black shadowy outline of the raider and gives the "tally-ho!" As he closes in, he checks with the observer to make sure the guns are okay and on "fire". At about one hundred to one hundred and fifty yards he opens up there is a roar as the ten guns come to life; he sees strikes on the raider, who wavers but answers with orange streaks of tracer. The Beau gives him another squirt; there is a burst of flame, an explosion and the raider hurtles earthwards, a flaming wreck, scattering burning pieces through the air as he falls. The fighter calls the controller and reports the success of his encounter and, if his own kite is undamaged, starts another chase.

The second Beau has also had a successful interception and is just closing in. As he opens fire the Hun returns it and the fighter staggers as an engine is shot out so he retires from the battle and limps home, noting with satisfaction the erratic flying of the raider. The Beau has lost his hydraulics so has no undercarriage, but carries out a successful crash-landing back at the base and on reporting to the Intelligence Officer finds his victim has crashed and is assessed as a "confirmed"-a certain victory. He also hears of the success of the first one and that a third fighter has been scrambled, has had a battle and claimed a "probable".

The raid is over now and the boys have drifted back in, after hanging around as long as they could hoping for something else to crop up.

After the Intelligence Officer has quizzed everyone who was in an engagement they settle down again to their books or cards. Someone boils water on the stove and makes tea.

As the dawn starts to break, a weary but satisfied group of crews climbs back into the truck and start back down the perimeter track to breakfast and bed as the rest of the station is getting up for breakfast and work.

W/C D. G. Morris, the R.A.F. officer from South Africa who for more than a year commanded the squadron in which Fumerton and Bing served in England, set an example to his pilots by destroying three raiders in two nights when the Luftwaffe attempted further raids on Tyneside at the end of September and the beginning of October. During the night of September 30th, 1941, Morris accounted for a Ju. 88 and two nights later a He. III and a Do. 217. He was awarded the Distinguished Flying Cross and his observer, Sgt. A. V. Rix, R.A.F., received the Distinguished Flying Medal. This pair subsequently (in July 1942) added the destruction of another night raider to their score.

Though scrambles were frequent in the autumn and winter months of 1942, enemy activity in our sectors was light. Visuals consequently were rare and there was little "joy" for the night fighter boys. However, on September 6th, P/Os R. R. Ferguson and D. Creed damaged a Ju. 88, and on September 25th-when eight enemy raiders appeared over Penzance-Sgts. E. S. P. Fox and H. G. Beynon were credited with a probable and S/L D. C. Furse and P/O J. H. Downes shot down a Do. 217 which crashed against a house and burst into flames near St. Just. It was not until a month later that successful contact was again made, when, under the bright October moon, P/Os J. T. Macdonald and E. W. Eldridge sighted and probably destroyed a Do. 217. But the success of a squadron is not always gauged by the extent of its destruction of the enemy and during the period our night fighters were utilized to a large extent in air-sea rescues. On one of these occasions, on November 7th, F/O

A. G. Lawrence and Sgt. H. J. Wilmer found a Spitfire pilot floating in the sea and threw their dinghy to him. He was later picked up by a launch.

The winter months also produced several unfortunate incidents. In at least one of these, tragedy was lightened by heroism. P/O W. D. Gibson, with Sgt. B. A. Leahy as his observer, despite engine trouble over the sea, nursed his aircraft back to base only to overshoot the runway and strike a building. The aircraft immediately burst into flames and Gibson lost his life. Thanks to the prompt action of LACs H. R. Carter, D. A. Cox and J. A. C. Corbeill, Leahy was rescued from the blazing wreck. For "his heroism (which) undoubtedly saved the observer's life" Carter was awarded the B.E.M. Corbeill has twice been mentioned in despatches. On the last day of the year P/Os H. Brooks and W. B. Mosley, both of whom had distinguished themselves in combats with Dormers earlier in the year, were lost along with two other men in an air collision.

Beafighters were also frequently used to guide home longrange bombers in distress and on one occasion Furse came to the aid of two such aircraft. One, a Coastal Command Liberator, had attacked a submarine in the Bay of Biscay from such a low height-approximately 30 ft.-that the explosion seriously damaged the aircraft, which had to return over 600 miles of ocean without elevator control. The Beafighter picked up the Liberator and guided it in to land, where it crash-landed and burned, but with one exception the crew escaped injury. On the same patrol, Furse was directed to a Whitley, which he found and led towards land until it was able to pick up bearings. S/L B. G. Miller and Sgt. E. Collis had a narrow escape when on October 1st one of their engines caught fire 18 miles out over the sea. They baled out, but thanks to the efficient work of the crew of a rescue craft suffered nothing more than a cold bath.

The fact that there were not more accidents can be attributed to the understanding of such men as W/C R. A.

Wills, who maintained in their units a complete and well-co-ordinated schedule of training in which great stress was laid on the necessity for the utmost co-operation between aircrews, ground controllers, searchlight batteries, telephone orderlies and the other hundred and one personnel on whom the success of night fighter operations depends.

Too frequently in a summary of operational activities the ground crew do not receive the recognition to which they are entitled. But the work of two men in night fighter units, F/L D. D. Carr-Harris, engineering officer, and Cpl. W. K. McIntyre, was recognized when the former was complimented by the Director of Scientific Research, Ministry of Aircraft Production, while the latter saw an inter-communication device of his design approved by Fighter Command.

Despite the uniformly bad weather at the end of 1942 and the beginning of 1943, there were many operational sorties. However, there were few contacts with Jerry and even regular visitors like the "weather man" carried on their daily patrols without successful interruption by our fighters. But such a period of bad luck must cease eventually and it seemed for a moment on January 15th that the elusive Jerry weather man would at last receive his just deserts. A patrolling Mosquito made contact and pursued him for ten minutes, but unfortunately no action resulted and the weather man lived to reconnoitre again. A week later FS B. M. Haight and Sgt. T. Kippling opened fire on a Do. 217 at 9,000 ft. and saw strikes from three bursts on the port engine of the Hun. The Dornier was lost to sight in the clouds but its destruction was confirmed by the Royal Observer Corps who saw it crash into the sea near Hartlepool. On January 26th P/O B. M. Harker was complimented by the A.O.C. of the Group when, after his port engine had blown one cylinder through the cowling and damaged the port wing, Harker made a single-engine landing without further damage to the aircraft-no mean feat in a Beaufighter.

In February, W/C Paul Davoud, who had been mentioned in despatches in June 1942 and had destroyed one enemy aircraft and probably destroyed another in the more than 12 months of his night fighter operations, was awarded the Distinguished Flying Cross for his "fine example and inspiring leadership".

March produced little more action, though the usual operations, patrols and scrambles were carried out. On the 9th, Lawrence and Wilmer (the latter now a Flight Sergeant), while on a routine patrol, encountered a Do. 217, which they drove into the sea in flames. On the 18th F/O D. Williams and P/O P. M. Dalton in a Mosquito sighted another Do. 217, which got into a steep dive in a desperate attempt to escape and failed to pull out. Not a shot had been fired, nor was there anti-aircraft fire at the time, but the crew were able to claim a Do. 217 destroyed. The 24th saw S/L Geo. Elms and F/O J. D. Hore-Kennard destroy a Ju. 88 with a 3-second burst.

From Defence to Offence

Patrols into France saw successful action by F/L R. N. (Doc) Harrison and P/O E. P. A. Horrex, who pranged four trains, and P/O G. R. Shipley and Sgt. W. Bonnet, who scored hits on two trains and a probable on a third. P/Os M. A. Cybuiski and H. H. Ladbroke, while patrolling the railway lines between Meppen and Papenburg on the evening of the 27th, damaged one tug, two barges, six freight cars, two locomotives and two military trucks.

On the 15th of April W/C F. W. Hillock and his observer, P/O O'Neil-Dunne, while on a sortie to the Ruhr, suddenly found themselves in the midst of several wireless masts. In attempting to extricate his aircraft, Frankie Hillock did a steep climbing turn and flew through the antenna at Appledoon radio station. The aircraft responded nobly and although this meeting with the radio antenna clipped approximately a foot off the starboard wing tip and made

several deep indentations on the leading edge, the pair were able to proceed on their course before returning to base, where it was found that they were still trailing over 300 ft. of ¼" copper cable. At about the same time another aircraft returned to report at least one Dutch town illuminating itself on hearing our aircraft overhead. On the same night S/L Stan Fulton and F/O R. N. Rivers attacked three passenger trains between Lamballe and Rennes, seriously damaging two of the locomotives and making strikes on the third. On the next night, F/O M. Taylor, with Sgt. K. Brown as his observer, attacked and damaged a locomotive while Harker, flying with Sgt. V. Williams as his observer, damaged others on a siding. Harker's aircraft was hit by fire from a flakship ten miles from Ouistreham and the starboard mainplane was seriously damaged. Despite this handicap he made a wonderful landing. Another aircraft piloted by P/O Dave Grant, with P/O E. V. Domone as his observer, was hit in mid-fuselage by Bofors flak while attacking a train in Creil. Despite very serious injuries the observer continued to assist the pilot safely back to base. On being rushed to hospital after landing it was found that Domone's leg had to be amputated. For his courage and fortitude on this occasion he was awarded the Distinguished Flying Cross. Taylor and Brown made another sortie on the 17th, this time against locomotives near Vire, when they were accompanied by Harker and Williams; the latter two unfortunately were lost on the sortie. S/L A. Barker and P/O A. H. Rose spotted a convoy off the Dutch coast, while FSs D. M. Norman and J. R. Hunt attacked Rhine barges and a factory. Three nights later Taylor and Brown were out again; this time they damaged a motor lorry at Damfort, while Norman and Hunt attacked a freight yard at Cleeve and barges in the Dutch canals.

To climax the month's activities, WO D. M. Mackenzie and Sgt. Taylor attacked two freight trains, one of which they seriously damaged, and on the 29th the *London Ga-*

zette announced the award of the Distinguished Flying Cross to F/O A. G. Lawrence and the Distinguished Flying Medal to his observer, FS H. J. Wilmer.

During May and June, the most notable thing about night fighter activities was the expansion of offensive operations. True, it was and is still considered that defence is the prime motive for the night fighter. But with the gradual increase in the numbers of aircraft available for offensive operations the character of the activities has altered considerably. As a result the number of sorties over occupied territory in one squadron increased 50 per cent. during the month of May. However, for the first two weeks of the month there was little of importance to report except for an attack on a barge on the Akersloot-Purmerend canal by F/O C. F. Medhurst and FS W. J. Gordon. With the arrival of the moon period, which each month brings delight to the night fighter and fear to the civilian population, who realize that that is the favourite time for bomb raids, P/O C. F. Green and Sgt. E. G. White attacked a locomotive at Abbeville and another near Flexicourt, and Mackenzie and Taylor attacked one locomotive near Eindhoven and another east of Halmond, and then a steam barge at Zaltbommel works which exploded with a large flash. F/O H. Bouchard and Sgt. W. Fyfe made a spectacular score of direct hits on five locomotives, a motor vehicle and a bright orange light on a railway line in the Dummer Sea area. All the locomotives were damaged and one was definitely destroyed. While Bouchard was thus occupied in Holland, Stan Fulton and Wilcox damaged two trains out of three which they attacked, to round off an exceptionally fine night's work for May 15th.

On the following night, Fulton and Wilcox damaged two trains along the Loire and attacked a third. On the 17th, Macdonald (now Flying Officer) and his new observer, P/O H. J. Tennant, damaged five trains and blew a bus off the road near Guingamp, while P/O Stew Murray and Sgt.

Johnny Ireland also damaged two trains.

The 18th was no less successful, when Fulton and Wilcox damaged four trains and an automobile and Murray and Ireland added five more trains to their score. R. R. Ferguson (now a Squadron Leader) and Creed gave a train a 3-second burst, but due to the fact that it was in the middle of a wood the result could not be observed. Norman (now a Pilot Officer) and Hunt attacked and damaged a train at Boynes and attacked a second at Puiseaux. Unfortunately on this night the squadron suffered a severe loss when F/O Butch Bouchard and Sgt. Fyfe, an experienced team and extremely well thought of in the squadron, failed to return.

Sgt. S. B. Huppert and J. S. Christie, on a patrol of sectors of north-eastern France on the night of the 18th, brought a train to a standstill near Béthune. On the next night, Norman and Hunt continued the good work by scoring direct strikes on a locomotive five miles north-west of Rhenen and attacking a row of barges near Doesborgh and goods wagons in a small freight yard near Zutphen. On the same night F/O G. S. Richards and FS C. Horne damaged three trains and P/O G. R. Shipley and Sgt. Bonnet damaged another. During this particular sortie Shipley and Bonnet ran into heavy flak and returned home with a large hole through one of the elevators and the tail riddled. On the following night they repeated the performance, but this time escaped without damage. On the 23rd, Bower, who had been promoted to Squadron Leader that day, and Beynon, were scrambled and returned full of beans as they claimed a Do. 217 destroyed five miles off Tynemouth. On the same night Sgt. D. Hildebrand, with P/O H. Wakeman as his observer, scored hits on wing and engine of a Ju. 88 despite its violent evasive action.

This moon period was particularly successful, as one squadron piled up a score of 24 trains damaged and two motor cars believed destroyed-an impressive total, for which the zealous and untiring efforts of the ground crew in

the maintenance of a high state of serviceability in squadron aircraft was in large measure responsible. Another squadron was less fortunate, since weather for these days was generally bad and only eight hours of night operations could be rolled up. The luck of the weather and the location of the base are no mean factors in a night's success in battle. This was proved during the following month, when the most outstanding squadron could only get in a total of some 17 operational hours with all its scrambles ineffective, aircraft turning out to be friendly or last minute accidents depriving them of their lawful prey. The sole consolation of the squadron was a Mention in Despatches for FS W. K. McIntyre in recognition of his submission of a valuable technical suggestion. Another squadron also had only eight hours of night operations and could only claim for excitement a near approach to the weather man on the "milk-run" patrol.

Crews of one Canadian detachment flying with an R.A.F. unit were unlucky when they sighted four Ju. 88s which were apparently being used as bait for a squadron of FW. 190s. In the ensuing melee, F/O R. B. Harris and Sgt. E. M. Skeel were shot down. But the R.C.A.F. fighters had better luck next day, when they sighted five U-boats and participated in an attack which resulted in damaging two of the enemy submarines.

A few days later, four Mosquitos (the Mosquito was coming more and more into use as a night fighter) one of which was piloted by F/Os E. A. Murray and P. R. Littlewood, shot down a BV. 138. Three survivors of the slow three-motored reconnaissance flying boat were seen in and around a dinghy. Two days later P/O C. F. Green and Sgt. E. G. White accompanied an R.A.F. squadron which scored hits on and damaged two small merchant vessels.

But, altogether, June was a somewhat disappointing month for the night fighters. Nor was July particularly eventful, as Jerry had cut his night raids to a minimum.

With chances of action over foreign fields greater, many intruder sorties were made over France, Belgium and Holland, but on only two occasions were noteworthy incidents forthcoming.

On July 15th, P/Os J. A. Watt and E. H. Collis on a patrol for rail and canal traffic over the Dutch-Belgian border, pranged and stopped a locomotive. On the same night, Norman and Hunt, the latter recently promoted to Flight Sergeant, scored strikes on a tug on the Elbe and attacked freight yards. Ten days later E. A. Murray (now a Flight Lieutenant) and Littlewood, saw and attacked an enemy aircraft, which they identified as a Do. 217, about to land on Deelen aerodrome. Before searchlights and concentrated flak forced the attackers to take evasive action, strikes were observed on the Hun's port engine. Murray flew parallel to the runway and saw the Dormer, with its port engine flaming, veer to the left, crash and explode. Circling the aerodrome, the Mosquito pilot noted another aircraft with its navigation lights on. He fired a long burst of cannon and machine-gun fire, scoring hits and putting out Jerry's navigation lights. Result—one destroyed and one damaged. On the same night Lawrence (now a Squadron Leader) and Wilmer got a Do. 217 over England. Despite violent evasive tactics by the enemy the Mosquito closed to 500 feet before opening fire. Jerry dived, following a huge flash from the starboard engine, but was unable to pull out of the dive and, still emitting volumes of smoke, hit the sea with a great splash. This chalked up the fourth destroyed by Lawrence.

The night fighters carried out a successful air-sea rescue on the 29th when they located a Fortress which had crashed in flames in the North Sea. The entire crew was later picked up by motor launch. The 10th had also witnessed a successful air rescue, when F/O G. R. Morgan and Sgt. D. Bentley located a lost transatlantic Liberator with ten passengers which was flying in 10/10ths cloud and half-mile visibility.

The Liberator was just about to land on an airfield under construction but was guided by our aircraft to a safe landing at an established base.

August was a very dull month for night fighters. One squadron reported "No joy-too bad," and "A bit tiresome, what," and wound up the month's record with "All the air-crew on the squadron are now operational and it just remains for Jerry to put in an appearance. How we wish he would". Another had less than fourteen hour's of operational flying, consisting of some half-dozen defensive patrols, one air-sea rescue patrol which produced no results, and a few scrambles against what turned out to be friendly aircraft.

Patrols over enemy-occupied Europe had varying success. On the 3rd and 14th they failed to produce any results, but on the 15th P/O R. D. Schulte with Williams damaged three locomotives, bombed a railroad bridge and, when twenty miles off the English coast on their return, shot down a Do. 217. The enemy aircraft exploded and crashed into the sea, the crew being seen to bale out. On the same night Lawrence with Wilmer bombed the runway at St. Dizier and attacked a train in the Paris area, observing cannon and machine-gun strikes along the train and a vivid blue flash.

The next night there was a further attack on St. Dizier. Norman with his observer bombed the aerodrome and then damaged three locomotives. Watt and Collis bombed . Dijon aerodrome and damaged two trains on the way home. The exploit was duplicated at Dijon by P/O K. R. McCormick and FS W. Nixon.

Patrols on the 17th and 18th were uneventful, though on the latter date F/O G. B. MacLean and his observer F/O H. Plant failed to return. Then on the 23rd Cybulski and Ladbrook bombed the Schleswig-Jägel aerodrome and a railway junction and on the 27th Norman and Hunt bombed Florennes aerodrome.

A daylight sortie was carried out on the 29th. Huppert and Christie attacked four barges, a motor launch and a dredge on Dutch canals but there was a return to night operations again on the 30th, as Watt and Collis bombed Deelen airfield.

Air-sea rescues were generally uneventful, but on the 2nd Cybulski and P/O L. M. Jones with their observers acted as support to a Lancaster on a search. A dinghy containing survivors was found. Searches for Fortresses on the 5th and 7th resulted only in finding wreckage.

Occasionally enemy fighters were intruded upon. F/O W. W. Foster and his observer P/O J. H. Grantham nearly came to grief when, on the last day of the month, they were scrambled but on attaining a height of 500 feet found themselves being attacked from below and behind. They took evasive action and, by climbing, managed to shake off the enemy. The aircraft sustained some slight damage.

CHAPTER VIII

INTRUDERS

A FURTHER refinement of the art of night fighting has been developed for certain other aircraft of Fighter Command, which penetrate into the enemy's territory to batter his aerodromes and make his own sky unsafe for returning raiders. While the name intruder is new—a product of this war—those who wore wings in France 25 years ago will recognize the similarity between the functions of the present-day intruder squadrons and those of the FEs., (pusher fighter-bombers) and Camels which the R.A.F. of those days sent out to attack the bases from which the Gotha bombers made their nightly forays against British cities and towns. In those days, the technique was to patrol above the enemy aerodromes until the raiders returned and—then attack them, or bomb the flare paths and hangars. Today, the principle is fundamentally the same.

Just as the tactics of night fighting in general have developed, so have the rules governing this newest type of squadron. And just as the night fighters who stayed over the home territory to drive off the Zeppelins and Gothas of 1914-18 were complemented by the intrepid FEs. and Camels, so are the defensive night-fighting Beaufighters and other types complemented by the Mosquito and other intruder squadrons of today.

The primary duties of an intruder squadron have been

described as "to create as much nuisance as possible for as long as possible" over enemy aerodromes. Like aerial sentries they patrol the bases of the *Kampfgeschwadern*, lying in wait for unwary bombers as they attempt to take off or land, attacking them in the air whenever possible or bombing and machine-gunning the runways, hangars and dispersal points. Pursuing similar tactics, intruders are also most effective in drawing off enemy night fighters or in forcing them to remain on the ground.

The passage of time has increased the variety of objectives against which these squadrons are used, so that now they include search-light belts, anti-aircraft defences, railway marshalling yards and factories. Recently, intruders have added train-busting to their activities. Searching along the railway lines of the Low Countries and Northern France until they find a freight train, they attack the locomotive with bombs, cannon or machine-guns, with the intention of crippling or destroying it and thus further disrupting the communications and supply routes of the Nazi occupation army.

Fighter Command's first night operations over enemy aerodromes in France were carried out on the night of Dec. 21st-22nd, 1940, just one day after fighter offensive operations against the Luftwaffe were resumed. Intruder operations by squadrons specially organized, trained and equipped for the purpose, have been a regular feature of Royal Air Force activities since the spring of 1941. However, it was not until a year later that an R.C.A.F. intruder squadron began to take part.

The R.C.A.F. intruder squadron during the early months of its existence was equipped with the American-built Douglas Boston III aircraft, powered by two Wright Cyclone engines and manned by a crew of three. The Boston, which was capable of very great speed close to the ground, was armed with 7 Browning machine guns and carried a bomb load up to 2,000 lbs. Later the faithful Boston

was replaced by the newer Mosquito which also packs a most potent sting.

Since the intruder squadrons are among the most hush-hush units of the R.A.F., their offensive success and the lives of their personnel depending upon absolute secrecy as to location, route of ingress to occupied countries and other details which are of much less concern to a bomber or day fighter squadron, their work may be discussed only in general terms. However, it is permissible to say that since the inception of the squadron the R.C.A.F. intruders have repeatedly bombed runways, flare paths and hangars and started many fires. In addition to causing material damage, they have effected considerable dislocation of the Luftwaffe's night flying operations. One particularly successful attack was made on Schipol aerodrome in the Netherlands, when bombs started a fire which a few moments later caused a terrific detonation as if an ammunition dump had been exploded. Though their activities are directed primarily against ground targets, R.C.A.F. intruders have had numerous encounters with enemy aircraft and in the short period from the formation of the squadron to the end of August 1942 had destroyed at least two enemy machines and inflicted damage on many more. In the ensuing year they continued to develop this side of their activities.

One night in May 1942 a Boston piloted by P/O A. Lukas, an American-born member of the R.A.F. but serving in the R.C.A.F. squadron, was patrolling a German airfield in the Netherlands. Lukas and his crew saw an enemy aircraft coming in to land. They dropped their incendiaries on the runway just as another intruder attacked the enemy. As a result of these two simultaneous attacks the German bomber crashed, burst into flames and was totally destroyed. The credit was shared by the pilots and crews of the two aircraft.

On August 18th, 1942, S/L G. L. Caldwell got his sights on an unsuspecting Ju. 88 just as it was preparing to

land with navigation lights switched on. Speeding up behind the Junkers, Caldwell held his fire until he was within a few yards of the bomber, when he literally blew the enemy machine to pieces in one blinding flash. Casually, the Boston continued its patrol and drove off several other bombers as they attempted to land. For this and other operations Caldwell received the D.F.C.

The R.C.A.F. intruders also had a most important part, even if the public heard nothing of it, in each of the three 1,000-bomber raids on Germany. They helped to clear the air for our bombers on the way to Cologne, the Ruhr and Bremen by harassing the Nazi night fighter aerodromes.

The intruders also have carried out special bombing missions and on one such occasion attacked the oil refineries and tanks at Ertvelde, north of Ghent, starting many fires. They have repeatedly bombed railway junctions and freight yards in the Netherlands, Belgium and Northern France.

Their now famous train hunts began in the summer of 1942. In one night our aircraft attacked five freight trains and exploded at least three of the locomotives. On numerous other occasions during that summer our Boston intruders destroyed enemy freight engines and caused still more trains to stop abruptly after receiving bursts of cannon and machine-gun fire.

Dieppe

In the combined operations raid on Dieppe, the intruders, like the fighter and army co-operation squadrons, had their part. During the operation one of our aircraft, after bombing its target, was attacked by a FW. 190 which raked the fuselage from end to end, set one engine on fire and seriously wounded the observer. The wireless operator's seat was shot from under him; the pilot's cockpit filled with smoke and fumes, and the Boston crashed into the Channel, breaking in two just at the gunner's compartment. Sgt. C.

G. Scott, the wireless operator air gunner, was thrown free just as the fore part of the bomber turned over and sank. Sgt. W. L. Buchanan, the pilot, and P/O P. C. McGillicuddy, the observer, floated to the surface dazed and helpless. Scott swam to Buchanan's aid, inflated his Mae West and dinghy and managed to get the unconscious pilot aboard. Then he swam to aid McGillicuddy, who due to his injuries was unable to disentangle himself from the shrouds of his parachute, which kept dragging his head under water. Scott freed the injured observer and then helped him into the pilot's dinghy, which was the only one to survive the crash. The one dinghy was not large enough for the three men so Scott swam about for 50 minutes until the Air-Sea Rescue Service picked them up. Sgt. Scott's "conspicuous courage and determination in the face of extreme danger" won him the Distinguished Flying Medal.

McGillicuddy, worn out by the strain of his long immersion and the loss of blood, died the following day. Buchanan has since been killed on operations.

—*And After*

Following Dieppe, intruders continued their regular activities of patrolling enemy aerodromes, reconnoitring, wrecking freight trains and dropping leaflets, but on only four occasions in the following four months were enemy aircraft observed. On September 9th, returning crews reported having seen aircraft shot down during the night and in October one crew saw two aircraft shot down in flames while another reported seeing three burning. In December and January crews reported on two occasions seeing aircraft land at enemy aerodromes, but neither time were they in a position to attack.

Train wrecking, however, provided somewhat more excitement. In one month one crew attacked eight trains and damaged at least three. On October 24th, W/C A. E. Saunders fired on and derailed a locomotive in a cloud of steam

10 miles north of Tours. The following day, the Zeesen radio station confirmed the attack and added the information that the engine driver and fireman had been severely injured. On November 16th a Boston came down to fire bursts on railway yards at Valenciennes and later machine-gunned a train outside Ghent, while on the following night six trains were attacked, one being forced to stop just east of Courtrai and at least three more damaged at Arras. On the 28th, a train was brought to a halt near Mantes, while another of our pilots was met by flak from a train which he endeavoured to destroy. The fact that Jerry now found it necessary to arm his freight trains was clear evidence of the success of the low-flying intruders.

On December 22nd, 1942, a Belgian pilot in the R.A.F., already the holder of the D.F.C., wound up his activities, on his last operational flight with the Canadian intruder squadron, in a most spectacular fashion. He was out looking for trouble generally when he found more than thirty locomotives in the railway yards at Meirelbeke, near Ghent, in his native land. He emptied his guns on the yards and probably punctured at least fifteen of the engine boilers. This successful sortie was the 35th operational trip for the pilot and the 65th for his air observer. The latter, a warrant officer of the R.N.Z.A.F. who had been trained in Canada, had received the Distinguished Flying Medal some months previously. Another New Zealander, an air gunner in the Canadian squadron, had won the same decoration in October after completing fifty intruder missions.

In February and March, 1943, the weather conspired against the intruders, but as many operations as possible were carried out with the, by then, slightly outmoded Bostons. In the meantime, word that the squadron was to be re-equipped with Mosquitos helped to keep up the spirits of the crews. On February 13th FS B. G. Henderson, while on a combined leaflet and intruder raid over the Bayeux area, was subjected to heavy flak at Caen. His aircraft received

one direct hit between the pilot's and the gunner's cockpit, which did considerable damage to the equipment and put the air-speed indicator completely out of commission. Despite this handicap, Henderson a few minutes later pranged a train. On the same night P/O H. C. Craft also shot up a train successfully, and two nights later S/L P. Burton-Gyles returned from a train attack near Amiens with a large hole through his fin and the pitot head connection severed. On the 16th of February F/L H. D. Venables attacked two trains successfully. Weather interfered with further action until the 26th, when Sgt. G. B. James returned from Melun and Bretigny with flak holes in the observer's cockpit door. On the following night F/L R. J. (Dick) Bennell scored hits on an unidentified enemy aircraft near Melun and on the 3rd of March shot down a Do. 217 which was orbiting over Deelen. On the 19th of March Burton-Gyles claimed strikes on the engine of a freight train near Evreux.

Spring Months

During March, Venables, recently promoted to S/L, was awarded the Distinguished Flying Cross for participating in a number of sorties and attacks on enemy airfields in Holland, Belgium and France, and for his inspiring leadership and devotion to duty, to say nothing of the fact that he had damaged numerous locomotives and storage tanks. Unfortunately, he was shortly afterwards posted missing when he failed to return from a trainbusting sortie to Melun-Bretigny. His loss was a particularly sad blow to the squadron. A further decoration had come to the squadron in January, when Styles, who had taken part in 99 operational sorties and had been the observer of an aircraft which had damaged a Ju. 88 off the west coast of Ireland in 1941, was awarded the Distinguished Flying Medal. Though not a Canadian, Styles had served with an R.C.A.F. squadron for many months.

April saw an increase in activities when 800 hours were

flown, two enemy aircraft destroyed and a number of trains damaged. On the 11th, Burton-Gyles destroyed one unidentified twin-engined aircraft at Beauvais but was unable to engage a second he saw at Creil. Three days later, W/C J. H. Little, in the face of intense flak, fired a short burst of cannon fire in the direction of an enemy aircraft which immediately exploded and crashed 100 yards short of the runway at Beauvais aerodrome.

In May, the intensity of the intruder operations increased. Two nights out of every three saw sorties over enemy-occupied territory, and on four nights out of every six on which the sorties went out there was some definite achievement. Trains were attacked, locomotives and trucks being damaged, and on one occasion a train in a tunnel was so successfully attacked that strikes were observed on the protruding locomotive. This latter achievement was scored by Sgt. James and his crew, who on the 25th successfully attacked barges on the Seine and inflicted damage on an unidentified enemy aircraft in the Melun-Bretigny area. Sgt. C. D. Ball and his crew attacked barges on the 18th, while a signal box was hit by cannon fire by S/L C. C. Moran and his crew on the 14th. F/L M. W. Beveridge attacked a train on the 12th, damaged an unidentified aircraft between Evreux and Bretigny on the 7th, and Dick Bennell damaged another unidentified kite on the 20th.

Of the aircraft, the best testimony comes from an extract in the squadron diary under date of May 6th, 1943:

The squadron said farewell to an old friend today—the aircraft Boston III K for Katy. Having completed 320 hours of flying this aircraft was despatched to X Airworks. . . . Early in the squadron's history K for Katy arrived fresh from the factory. P/O Craft, P/O Morton and P/O Davis made twenty-nine operational trips over enemy territory in her. During the whole time with the squadron no trouble was ever experienced with her. She was the pride of the ground crews. She leaves the squadron after completing her tour with the same engines and propellers with which she arrived.

The ground crew of the servicing echelon were praised in certain iambic cadences attributed to LAC Wharton, which were found on the desk of F/L A. Warner, the engineer officer:

We're just the boys of Echelon
 Who don't wear silver wings;
 We only keep them flying
 And take the grief that brings.

We get no glaring headlines
 And hear no songs of praise;
 And when we sign the job as done
 Our necks stick out always.

Electricians, fitters, riggers
 With instruments and guns
 We take a crate to pieces
 To see just how it runs.

So aircrew keep them flying,
 We're all behind you here,
 And when you score a victory
 We'll be the first to cheer.

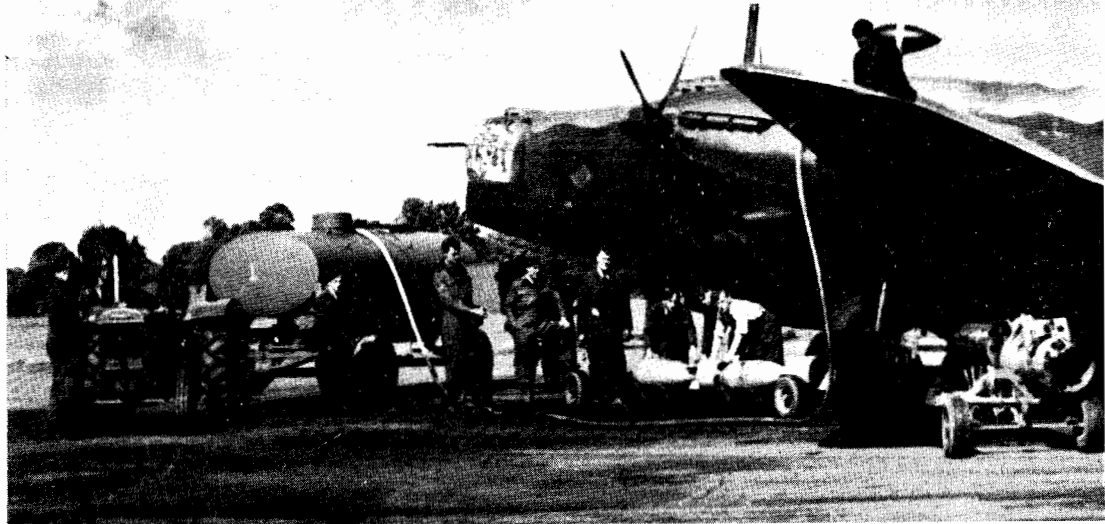
June

There was little diminution of activity in June and during the second half of the month hardly a night passed but one, two or more locomotives were attacked and railways pranged. The 19th saw the introduction of a somewhat new technique when Moran and his observer, Sgt. G. V. Rogers, made four attacks on a train, following which they dropped two 250-lb. bombs on the locomotive which had now stopped. The results of this attack were not observed, but from that date it became common practice to use bombs as well as cannon and machine-guns in attacks on trains. Some of those who made attacks during the month were: F/O H. A. Hoar on the 17th; FS D. Walsh and Sgt. H. May

on the 19th; Dick Bennell on the 20th ; Sgt. W. Gunn on the same date; FS J. H. Kingsbury, who attacked four on the night of the 21st; F/O D. O. Norcott, Bennell, Beveridge and G. Labram, all of whom attacked trains on the 21st. Ball (now a Flight Sergeant) attacked two on the 22nd, while F/O R. H. Lee damaged three on the 22nd and another on the 23rd. Labram attacked two, scoring a bomb hit on the track in front of another on the 24th. Kingsbury attacked one on the 25th, Moran one on the 26th, and Ball two on the 27th.

Frequently the targets were varied. Thus Moran had a go at barges on the Seine on the 23rd. Other targets were freight yards, aerodromes, runways, railroads and bridges and, on the 15th, a badly blacked-out factory at Melun. These sorties were not all accomplished without accident, and that which befell Labram and Sgt. A. L. Smith on the night of the 28th is worthy of note. The aircraft hit an obstruction near St. Trond, and two minutes later the port engine vibrated and shot out flames. The pilot feathered the propeller and cut the engine, when, to add to their discomfort, on leaving the Belgian coast the port mainplane was hit by flak which in some way damaged the undercarriage. On return to base he had to make a belly-landing but fortunately no one was injured.

With these, exceptional activities, the primary purpose of intruders was not forgotten and in the last week of the month a number of engagements took place. Beveridge, Sgt. B. O. R. Bays and FS H. Anderson saw a lighted aerodrome at Coulommiers on the night of the 20th. An aircraft which they identified as a Do. 217, with navigation lights on, was followed in and attacked and left with smoke pouring from its starboard engine as it steadily lost height. It was probably destroyed. Kingsbury and Yerby attacked an unidentified aircraft at Mantes on the 24th and scored strikes on its fuselage and starboard wing roots, while F/L N. H. Spencer attacked another on the 26th and Ball saw



ABOVE: Mechanics at work on an R.C.A.F. Wellington medium bomber.
BELOW: Cologne, Germany, showing very heavy bomb damage.



1. A Beaufort. 2. An R.C.A.F. Boston. 3. An R.C.A.F. Halifax. 4. An R.C.A.F. Wellington. 5. S/L C. S. (Dusty) Dowie, D.F.C. 6. W/C W. H. Swetman, D.F.C.

strikes and a bright yellow light on yet another at Bretigny. On the same night Moran and Rogers, his observer, had a busy time. Arriving at Avord aerodrome they found full operations going on, with lights ablaze and aircraft landing and taking off. They attacked one aircraft, which they identified as a He. III, and saw it crash in flames. They then attacked a Ju. 88 which, when they forced it to crash, exploded on the ground. Not content with this, they went off to Bourges where they dropped bombs on a radio installation, one of which exploded near a pylon. Then, northeast of Mantes, they scored hits-on a locomotive. To complete the month's work Kingsbury and Yerby attacked an aircraft near St. Trond and saw strikes on the Jerry before it landed.

While the month was productive of much operational success it also had its unpleasant side. One crew-FS H. Q. Findlay, F/O D. A. Carmichael and Sgt. J. W. Robertson did not return from a sortie to Orleans and Tours on the 22nd, which added to the grief of the squadron at the loss of their Commanding Officer, W/C J. H. Little, D.F.C., and his observer, WO D. H. Styles, D.F.M., which had occurred earlier in the month.

July

During July intruder operations were carried on for 21 nights and bombing assumed a greater part in their activity. On the night of Dominion Day, F/O F. W. Hallwood and P/O L. F. S. Spackman made up for the lack of customary fireworks (though they could do nothing about the ice-cream!) by operating in the Amiens-Laon sector where they bombed a row of blue-green lights to the north of the first-named city. Owing to the searchlight and flak defences, they were unable to observe the result. When we read in the squadron diary that Beveridge was patrolling the Amiens-Creil sector on Dominion Day and bombed a train and railway lines near Pacy without observed results and that uneventful patrols were flown by Moran and Lisson to the

Orleans-BourgesAvord sector, it means little or nothing to the average reader, but put against the risks which the intruder pilot runs on every sortie as a matter of course, the simple statement assumes a much greater significance. One such hazard encountered when crossing the sea at night is that alert ships' gun crews are not always able to distinguish between hostile and friendly aircraft and as seamen are notably quick on the trigger more than one Canadian has been fired on by convoys which he was inadvertently and unconsciously passing over. Thus by land and sea alike, Dominion Day in Canada was Walpurgis-night over Europe.

One of the greatest difficulties of the intruder crew is their inability to assess their own achievement, which may be seen in reports that on July and F/L N. H. Spencer, on a patrol near Coulommiers, Melun and Bretigny, bombed a railway junction north-east of Bretigny but saw no bursts; Kingsbury, patrolling Poix, bombed a train near Oisemont and observed no results; Dick Bennell, on a sortie to Orleans, bombed a railway two miles south of Rouen, and then attacked an enemy aircraft, but saw no strikes in either case—all due to cloud conditions. The following night, with improved visibility, Labram saw some half-dozen unidentified aircraft falling in flames and damaged a train a few miles from Amiens, while Spencer definitely damaged an unidentified aircraft at Melun but was unable to observe results when he bombed a train near Breteuil. Kingsbury saw one of his bombs burst on a railroad track and then attacked six lorries in convoy, while F/O R. R. Rowlands also saw one of his two 500-lb. bombs burst on a railway. Railroads, trains and freight yards were the targets on the 4th, 5th, 6th and 7th with four, three, five and seven operational sorties being carried out on those respective dates. On the 8th, aerodromes were the targets with Moran, Hay and Ball bombing Florennes, while Beveridge attacked Montdidier-Rosières. Railroads and trains were the objectives of other

pilots. For the next four nights weather conditions interfered with operations but on the 12th, Lisson, Lee and Paul Davoud, who for some time commanded a night fighter squadron but had recently transferred to intruders, all attacked railways while Moran and Beveridge attacked trains. Hallwood's aim was interfered with by the hot reception he received at Cormeilles but he dropped his bombs near a bridge, just missing the target, while Beveridge bombed an aerodrome at Mourmelon. On the following night, the 13th, all efforts were directed against aerodromes when Moran and Hay went to Venlo, Lee and Beveridge to Deelen, Lisson and F/O J. R. F. Johnson to Gilze, Hallwood and FS T. Griffiths to St. Trond.

The 14th was a stand-down, but the 15th was the most active night of the month: Davoud started a small fire when he bombed Rennes airfield and saw bursts half-way along one runway. Sgt. J. C. Bunch attacked a railway junction, damaging a freight train, while Rowlands bombed an aerodrome at St. Dizier, damaging a near-by train and halting a second, and FS D. C. S. MacDonald bombed Rennes aerodrome and damaged another train. Hoar bombed Cormeilles aerodrome and Gunn scored hits on the runway at St. Dizier. F/O D. D. Johnston bombed Rennes aerodrome; Labram attacked St. Dizier aerodrome, two trains and a freight yard; while Bennell bombed a railroad. Moran made the only sortie on the 16th, attacking communications.

Beveridge bombed St. Trond on the 17th and Hallwood not only started a fire at Limay but attacked a train, though in the latter case he was unable to see the results as he was temporarily blinded by his own tracer. He later saw a long glow in the place where the train had been standing. Davoud bombed hangars at Bourges on the same night. The activities of the 18th produced little remarkable, though railroads and barges were attacked and large scattered fires observed in woods west of Bretigny. Following a week of inactivity, Gilze airfield was bombed on the 25th by F/O J.

R. F. Johnson and Beveridge; Deelen by Ball and MacDonald; Melsele, near Antwerp, by Hallwood, and Enschede by Moran. Hay and his observer, P/O J. L. Seymour, failed to return from this series of sorties. The following night the squadron resumed their attacks on communications as well as airfields. MacDonald bombed Evreux and Mantes; Bennell, Chartres; and Johnston, Creil; while Kingsbury bombed a train near Auvers and attacked a railroad and enemy aircraft near Cormeilles. Spencer attacked a railroad near Orleans, Gunn a junction near Melun and Bennell a junction near Orleans. The activities of the following two night raids read much like those of the 2,0th, the only difference being that Johnston, when shooting up a train and bombing Beaumont-le-Roger airfield, also attacked an automobile near Les Andelys, while Gunn attacked a train and also bombed Beaumont-le-Roger. Sgt. J. C. Blinch attacked a railway near Creil and Beauvais airfield and Labram bombed a junction near Melun. The 28th, 29th and 30th saw duplications of the work of the 27th, except that F/O N. Cole and his observer, F/O A. A. Shepherd, failed to return.

The week also saw the award of two decorations to intruders when on July 27th, Craft and Morton were awarded the D.F.C. Craft received his award for sixteen months' operations in intruders during which he had attacked airfields, trains and freight yards and destroyed a Ju. 88. Morton's award was for sixteen months' service as an intruder observer on numerous patrols over enemy airfields in Belgium, France and Holland. It might be noted here, also, that Dick Bennell was awarded the U.S. Air Medal for services rendered in 1942 in guiding U.S. aircraft to their base in exceptionally bad weather.

August

August saw continued good weather for intruder operations, when on two nights out of three work was possible

and attacks were made on the usual targets, railways, freight yards, locomotives, trains, bridges, signal boxes and aerodromes, and enemy airfields were patrolled to pick up unwary aircraft landing or taking off.

The first night of the month saw two uneventful sorties to bomb Bourges aerodrome and patrol Orleans and Châteaudun, while on the 2nd there were eight bombing sorties and one intruder patrol. The latter was not completed owing to cloud conditions, but the intruder-bombers attacked Ardorf, Westerland, Vechta and Schleswig-Jägel airfields. The evening was "uneventful"—and here is what the operations record book says of it:

In Furstenu area experienced intense tracer-green and red and approximately 25 searchlights, some of which illuminated momentarily, and crew could see large factory below. Violent evasive action was taken. A red beacon, a white beacon, and a large fire in target area bombed with four 500-lb. bombs at 0132 hours. Bursts observed and a glow remained until lost in distance. Saw an enemy aircraft land at Bergen-Alkmaar and a second enemy aircraft making circuit. Mosquito returned and shot up a white beacon and some buildings at this drome; beacon doused. Weather: Much haze, electrical storm over target. Visibility poor.

Weather interfered with operations for the next four days and it was not until the 7th that the intruders were out again, when Spencer tried to attack five enemy aircraft at Avord but could not get close enough. He proceeded on his way, but returned and saw four more, one of which he attacked from 750 yards. Unfortunately, just as he opened fire the side of his gun fell off and the attack had to be abandoned. Bennell also saw three enemy aircraft, but being unable to engage them turned his guns on a freight yard near Toulouse and started a small fire. On the same night, airfields, railways and freight yards were bombed and automobiles attacked.

When Hallwood returned from an intruder operation in the Melun-Bretigny neighbourhood on the 9th he reported

that he attacked an unidentified aircraft at a height of about 500 feet and observed strikes on the port side of the enemy. He then sighted a second aircraft well above him. He followed the second aircraft to 3,000 feet, when both the aircraft and the airfield put out their lights. A fire, presumably from the first aircraft he had attacked, was then seen to be burning at the far end of the aerodrome. The same evening Davoud observed a well lighted factory surrounded by large flood-lights. Suspecting a decoy he kept his bombs for St. Dizier airfield, where two large bursts were observed near the north-east end of the administration buildings.

Nothing further of moment happened with the intruders until the lath, when P/O B. G. Henderson observed what seemed to be an aircraft burning on the ground, and fifteen minutes later saw a fire in a wood which might have been caused by incendiaries dropped by Henderson and other pilots bombing St. Dizier aerodrome that night. Labram had a busy time on the night of the 15th, when, shortly before one a.m., he attacked hangars and buildings at Clermont-Ferrand and observed many strikes. He then attacked a hangar near Vichy, a round-house north of the city, a locomotive in the freight yards and the freight cars of a train going south. His last target was a third train, the only target on which he was unable to see the effect of his fire.

Again, on the 16th, aerodromes and trains were the objectives when MacDonald attacked a train three times and after it had stopped in a gully went up and down its length peppering it with cannon and machine-gun fire. Norcott stopped two trains and bombed the dispersal area at Evreux. Rowlands, after bombing the dispersal area at Tours, attacked as searchlight and an electric train. He observed a red glow inside the train and hied off after two others, which, however, eluded him. Near the coast, on the way home, he ran into difficulty as one of his engines failed and took fire when re-started. After five minutes' frantic

work the fire was extinguished and Rowlands returned to base on one engine. On the same evening Johnson, after bombing a runway at Evreux, had his plane badly punctured by flak, but continued on his patrol, during which he unsuccessfully chased two enemy aircraft, bombed St. André aerodrome and attacked two trains. Strikes were observed on both trains and a second attack on one drew return fire.

The 17th also witnessed considerable activity. Johnson attacked a train going west in a wood eight miles from Nevers, following which the locomotive exploded and emitted dense clouds of steam. Hoar, returning after bombing Ardorf aerodrome, was fired on by two small ships and reported a convoy of twenty vessels north of Terschelling. The following five nights were busy but only moderately eventful. On the 23rd, a number of intruders operated. Norcott attacked an unidentified enemy aircraft near Parchin, seeing strikes and smoke, while Labram attacked another at Stendal and observed strikes. Unfortunately S/L G. C. Matheson and his observer, Sgt. L. W. Bush, failed to return from a sortie to Orleans and Châteaudun.

On the 24th, Johnston attacked three of six trains he spotted at Fontainebleau, and as a result saw bright flashes and clouds of steam on the locomotives. He damaged a fourth locomotive near Etampes.

The 27th was the most successful evening for the intruders, when Norcott bombed a railway in north-eastern France. The winco reported six orange and two white explosions along the railroad near Ault; Johnston reported an explosion which looked like a burning aircraft and Dick Bennell saw a large log fire near Ault.

To close the month, F/O C. C. Scherf bombed a junction near Abbeville, and Norcott, after hitting the track in front of a train near Termonde, reported an aircraft crash and an explosion near Antwerp.

CHAPTER IX

THE BATTLE OF GERMANY

AT sixteen minutes past eleven on the night of June 12th, 1941, the first of four Wellington bombers—affectionately known as Wimpies—rolled down the runway of an aerodrome in eastern England and roared away into the darkness. All four were laden to capacity with a cargo of goodwill for western Germany—goodwill, that is, in the kind intentions of their crews to utilize their movable freight to the best advantage of our cause, and the greatest possible confusion of the enemy.

From other air stations, many other aircraft were taking off, all with the same objectives in view and all imbued with the same determination—for this was a special night. The force was one of the largest ever mustered by Bomber Command, and never previously had such a heavy load of missiles been carried in a single operation. In all, 445 tons of bombs were dropped on three important railroad centres in western Germany—Soest, Schwerte and Hamm, integral cogs in the network of Nazi communications. Very thick ground haze made pin-point identification extremely difficult, but numerous fires were seen to break out in the attacked areas.

One of those four Wimpies, which were from a Canadian squadron, developed engine trouble and was forced to jettison its bombs and return to base. The other three flew

steadily on and after reaching their particular target—the Schwerte yards—at one-thirty in the morning, dropped their eggs at heights varying from 7,500 to 10,000 feet. At twenty minutes past five the last of the four Wellingtons touched down at their home station—and the first bombing operation carried out by an R.C.A.F. squadron was *un fait accompli*.

It is not surprising that this first long-distance operation by a Canadian unit was carried out entirely by R.A.F. aircrews, as in the early days of the Canadian squadrons formed overseas a large percentage of their personnel was non-R.C.A.F. But those four Wellingtons were the forerunners of a constantly growing stream of R.C.A.F. bombers, now manned mainly by crews from the Dominion, who night after night carry the war to Hitler's Reich and in so doing help to keep up that relentless assault on the war-essential industries, railways and harbours of the enemy. Within a year of the first "symbolic" R.C.A.F. operation, 68 bombers from Canadian squadrons took off on a single raid against the Nazi stronghold.

A full appreciation of the work of R.C.A.F. personnel in Bomber Command's unending offensive against Germany's commerce and industry, or a true realization of how large a part Canada has in these repeated blows at the Reich, is, for the present at least, an almost impossible task. For the air crews of the Canadian squadrons represent but a fraction of the total number of R.C.A.F. personnel serving in Bomber Command. In Lancasters, Halifaxes and Stirlings, in Wellingtons, Hampdens and Mosquitos, in every type of aircraft used by Bomber Command, there are found R.C.A.F. pilots, navigators, bomb aimers, flight engineers, wireless operators and air gunners who, by virtue of their absorption into the R.A.F., are lost for the moment to R.C.A.F. historians. The impressive figures of the total must remain an official secret, since that is information which would be of much more use to the enemy than of

interest to readers of this narrative. Here, we are concerned with only that small portion of the whole who serve in R.C.A.F. squadrons.

Obviously, with many hundreds of planes involved in a raid, the assessment of the success or failure of specific aircraft is wellnigh impossible, and the descriptions included in this chapter are rather an attempt to describe the whole operation than to single out for individual praise or blame any particular aircraft or unit. In the interests of security, it is not advisable to indicate the proportion of the raiding force made up of Canadian squadrons, but some figures may suggest the scale of their operations. In the fifteen-month period from June 1941 to August 1942, R.C.A.F. squadrons dropped more than 2,000 tons of bombs and 400,000 incendiaries during raids over enemy territories—an average of five tons of high explosives and almost 1,000 incendiary bombs for every night of the period. And the bombs ranged in size from the small 4 lb. incendiary to the huge 4,000 lb. block-buster.

A list of the R.C.A.F. targets reads like a page from Baedeker, and includes all the major centres of commerce, industry and transportation in Germany west of a line drawn from Stettin to Stuttgart; it also includes invasion ports and naval bases in the Netherlands and occupied France, Nazi-controlled French factories in the Paris area and industrial plants at Turin in Italy.

During that period, personnel of R.C.A.F. squadrons in Bomber Command won 45 decorations: one D.S.O., one bar to the D.F.C., twenty D.F.C.'s and 23 D.F.M.'s; and two officers and one airman were mentioned in despatches for their services.

The Early R.C.A.F. Bomber Squadrons

The choice of a commanding officer is probably the most important consideration in the organization of a new squadron—and this was one to which due care was given in

the formation of all the R.C.A.F. squadrons. As at first there were not within the ranks of the R.C.A.F. senior officers of sufficiently recent operational experience to permit of their being trusted with the lives of hundreds of air crew in these bomber units, and since the average Canadian has a mentality more than a little different from his British brother, the majority of the first commanding officers were chosen from Canadians serving in the R.A.F.—the legion who had made their way to England and gained their wings in the days when the Nazi menace was but a threatening cloud. These officers, with their Canadian heritage and outlook, fortified by the matchless quality of R.A.F. peacetime training and their wartime operational experience, proved ideal leaders of their compatriot fledglings. So we have veterans like W/C P. A. Gilchrist, D.F.C., S/L R. C. Bisset and S/L W. B. Keddy as the senior officers of the first overseas bomber unit of the R.C.A.F. Bisset and Gilchrist had flown together in 51 Squadron in those “phony war” days when bombers carried leaflets rather than explosives. And Gilchrist later piloted a Halifax on the introductory operation of that type, while Bisset, who had taken part in the second leaflet raid on the Ruhr, chalked up many reconnaissances of the Sylt-Borkum area. Keddy had been flying for four years in the R.A.F. before he and Bisset joined Gilchrist’s squadron as flight commanders. All three of these officers have since been reported missing, though W/C Gilchrist survives and, having escaped from enemy territory, is now interned in a neutral country. Another R.C.A.F. bomber squadron was led by W/C N. W. Timmerman, D.S.O., D.F.C., S/L W. J. Burnett, D.F.C., and F/L A. C. P. Clayton, D.F.C., three Canadians who had previously served together in other squadrons. Timmerman’s long operational experience had included bombing destroyers, railroad bridges, freight yards and aerodromes, together with numerous long reconnaissances and mining operations during which he had met, and

bested, flak ships—the destruction of one of which he is credited with—in addition to destroying an Arado seaplane. W/C J. (Moose) Fulton, D.F.C.' A.F.C., was another Canadian in the R.A.F. who was appointed to command an R.C.A.F. bomber unit and who lived long enough to achieve undying fame and give his nickname to the famous Moose Squadron. Fulton, born in Kamloops, B.C., had learned to fly in 1931, at the age of 18, and joined the R.A.F. in 1934. With the outbreak of war, his courage and brilliant leadership in the sphere of active operations won him the purple and white ribbon of the D.F.C. He subsequently rendered outstanding services as a test pilot with the R.A.F. Experimental Section at Farnborough, for which he received the Air Force Cross. In August 1942—just one week after he had failed to return from an operation in which he led his R.C.A.F. squadron over Hamburg, the *London Gazette* carried the announcement of the award of the D.S.O. to this gallant Canadian, who has been referred to as “one of the most popular squadron commanders in the R.A.F.”

Trained and led by such men as these, it is little wonder that the R.C.A.F. bomber units have carved a special niche in the Hall of Fame for themselves.

In June 1941 our bombers took part in raids on Schwerte, Cologne, Bremen, Kiel and Wilhelmshaven. In July they added Dortmund, Frankfurt, Osnabrück and Hanover to their list, and paid two return visits to the city of the cathedral on the Rhine. In an attack on Aachen they were particularly successful, when, under conditions of perfect visibility, they were able to observe the effect of their attack, which left the railroad city a roaring mass of flames. Karlsruhe, Magdeburg, Mannheim, Duisburg and Berlin were new additions in August and Dortmund, Cologne and Kiel came in for renewed attention. The attack on the railway junction at Mannheim, one of the most important in western Germany, was carried out under bad

weather conditions and little observation of the results could be made. One of the attacking Hampdens was caught in a searchlight cone over Brussels, on the return trip, and attacked by two Me. 109s—but the rear gunner of the Canadian plane returned the fire with such deadly effect that one of the attackers was claimed as probably destroyed—the best that could be expected” over enemy territory, barring the actual breaking up or bursting into flames of the victim.

In September, R.C.A.F. squadrons took part in many smaller raids, in addition to six major attacks—the latter including sorties against Berlin, Stettin, Hamburg and Turin. The attack on Berlin was carried out under ideal weather conditions and caused numerous fires to break out all over the target area. Stettin, an important industrial and shipping area on the Baltic coast, was also the recipient of two visitations by large forces, both of which included R.C.A.F. aircraft. So successful was one of these attacks that a huge fire started by the bombs was visible to our crews for seventy miles after they had turned homewards. Equally successful were two raids on Hamburg, when the Blohm and Voss shipyards and the docks got a thorough going over and “most satisfactory” fires were started. During one of the raids on Hamburg, Clayton, who later commanded another R.C.A.F. squadron, circled the target area for twenty minutes, carefully pin-pointing his position before making his run and releasing his bombs. It is not surprising that with such meticulous attention to detail and careful preparation his bombs scored direct hits. In another raid, the Canadians took on the long distance and hazardous flight over the Alps to annoy the lesser partner of the Axis by dealing Turin, with its important war industries, a heavy blow.

October saw another attack on the Blohm and Voss works at Hamburg, and sorties against the Krupp works at Essen, the railroad yards at Duisburg, the railroad station at Mannheim and the synthetic rubber factory at Huls. But

October weather, traditionally bad, militated against the success of some of these raids, and most assuredly against any accurate observation of bomb damage. On the night of October 12th, P/O D. F. H. Biggane at the helm of a Hampden bombed a searchlight belt and then attacked and scored direct hits on a 1,000-ton ship in the harbour of Den Helder, Holland. Two weeks later, on the night of the 29th, another Hampden piloted by P/O D. H. R. Campbell, an R.A.F. pilot serving with the R.C.A.F. squadron, spotted an enemy aerodrome which is believed to have been Alkmaar and, after circling the field eight times, dropped its eggs from 1,000 feet. So successful was this attack and delivered from such a low level that Campbell and his crew for a moment feared that their aircraft would break up from the force of the explosion.

November weather was no better and with the exception of a few large-scale raids, notably on Berlin and Hamburg, most of the operations were on a small scale, with targets near the Nazi-held coast. However, the Hamburg raid was carried out under unexpectedly good conditions for November and, though greatly hampered by intense searchlight and flak opposition, was eminently successful and the extent of damage could be seen and assessed in the clear moonlight. On another night, one of the Hampdens was part of a force attacking Osnabrück when it was attacked by a Me. 109 and in the course of evasive action was forced to dive steeply for 9,000 feet. The pilot, Sergeant H. V. Dadson, who has since been killed in action, smelled smoke and fearing that his aircraft was on fire ordered his crew to stand by to abandon aircraft; however, he shortly realized that the smoke was from his own guns and told his crew to hold on, but Sergeant B. W. Palastanga, an R.A.F. man who was acting as observer, had unfortunately already jumped, and joined the legion of "missing after air operations".

It was during this period that one of the classic episodes

of the R.C.A.F. took place. One of our bombers, aiming for Cologne, was caught in the intense searchlight belt which protects the cathedral city and to escape the beams the pilot dived his craft for over 10,000 feet. With the wind whistling—and all crew members waiting tensely for anything that might happen—the intercom. from the front gunner breathed in agony: “Hey, skipper, for God’s sake say something—even if it’s only good-bye”.

December as usual was a month of duff weather, though for a raid on Emden the sky was unexpectedly clear and the weather ideal. The snow brought out all the ground features and with the aid of brilliant moonlight the bomb aimers thrilled as they saw their sticks of bombs straddle the docks and heart-filling golden flames break out in the area. One of our crews was able to obtain excellent photographs of the strafed docks to substantiate their reports. Two other raids of moderate size were carried out by the Canadians on Wilhelmshaven during the month.

December also saw several daylight raids, in one of which a tanker in the Ems River was blown sky-high by P/O A. S. M. Pim, who later attacked a flak emplacement from roof-top height. On the following day, December 11th, Sergeant G. F. Beaver, a member of the Royal New Zealand Air Force serving with the same Canadian squadron, made a surprise attack from 50 feet on the Luftwaffe aerodrome at Leeuwarden in the Netherlands, bombed the buildings and machine-gunned Nazi personnel as they scurried for shelter.

In addition to these raids carried on between June and December 1941, and many other small attacks on the fringe targets of the Netherlands, Belgium and Northern France, the R.C.A.F. squadrons had shared in Bomber Command’s sorties against the battleships *Scharnhorst* and *Gneisenau* sheltering in the docks at Brest. On the night of July 4th, Keddy led a group of Wellingtons on the target and had the good fortune to arrive before the smoke screen was fully

operative, with the result that the crews of the Wimpies were able to see the cruiser *Prinz Eugen* also docked in the port and straddled the dock with a well-placed stick of bombs. All of which drew the following commendation from their Group Commander: "Well done ... Yours was easily the best group show last night".

Bombers Attack Brest

On July 24th one of the squadrons took part in the largest daylight raid carried out by the R.A.F. up to that time—again the target was Brest. Fortresses, Halifaxes, Wellingtons and Hampdens, escorted by Spitfires, made up the force, which, despite extremely heavy opposition from ground defences and enemy fighters, pressed home its attack under ideal weather conditions, with claims verified by most excellent photographs taken by Bisset and other pilots showing direct hits or damaging near-misses on the *Gneisenau* and *Prinz Eugen* at Brest and the *Scharnhorst* which was then at La Pallice. The fighter opposition on this raid was particularly heavy and the R.C.A.F. squadron lost two aircraft, including that piloted by its commander, W/C Gilchrist, in an engagement which had included attacks on five of the Canadian planes. Sergeants Craig, McNeill, Leonard, Bain, Hughes and Higgins, in Wimpy *V for Victor*, were engaged by four Me. 109s and Higgins, the rear gunner, and Hughes, the front gunner, each sent one of the Huns down as a flaming mass of wreckage. But the Wellington and its crew did not escape unscathed from the encounter. Higgins was wounded as his turret was put out of action, and the fabric of the plane caught fire. While Bain, the wireless operator, struggled with and finally extinguished the flames, the pilot, Craig, after losing height steadily was forced to crashland his craft in the drink 300 yards from shore. As the crew scrambled into their dinghy, a motor boat put out from shore and picked them up. All, aside from Higgins's wound, were as good as ever and "rarin' to

go" on another bout with the Hun. Sergeants Farmborough, Saunders, Beach, Angus and Thorogood, with Flight Sergeant R. E. Parsons as rear gunner, in *Q for Queenie*, were attacked by another Me. 109, which Parsons soon despatched to the place where all bad Nazis should go. On this sortie two members of the Canadian squadron were singled out for special mention, Keddy receiving the D.F.C. and Parsons the D.F.M. —the first of a long list of decorations won by members of R.C.A.F. bomber squadrons.

In addition to these exploits, one of the R.C.A.F. squadrons had a part in combined operations by Fighter and Bomber Commands in daylight attacks on objectives in occupied France. The freight yards at Abbeville and railroad repair shops at Lille were two of the targets taken on by the Hampdens, when, despite very heavy and accurate flak which scored hits on many of the aircraft, every machine was at least able to limp home to base. In a raid on September 17th, 1941, the R.C.A.F. Hampden formation shot down a Me. 109F and several others were driven off by the accurate shooting of the air gunners.

60,000 Incendiaries Dropped

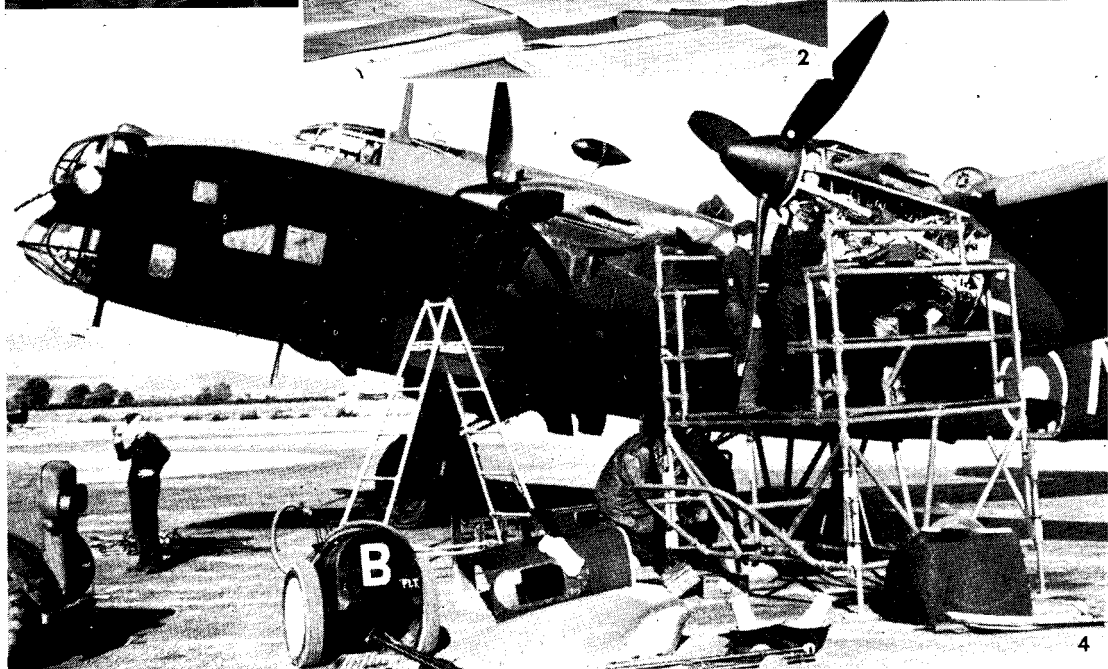
In all, during the last seven months of 1941, R.C.A.F. bombers dropped nearly 700 tons of high explosives and over 60,000 incendiaries in the course of their operations and won eight decorations, including D.F.C.'s to Keddy and Biggane and D.F.M.'s to Parsons, to three N.C.O.'s of one crew with many operational hours under their belt (Sergeants W. J. Turner, J. O. Little and W. F. McMaster), to Sergeant J. Garnett (the wireless operator air gunner of a crew which had three encounters with enemy night fighters on one night and two nights later successfully evaded attacks by a further four), and to Sergeant R. P. B. Dodd (a skilful Wellington pilot who had a part in the first and many subsequent R.C.A.F. bombing raids).

1942 Operations

In 1942 the representation of the R.C.A.F. in Bomber Command was augmented by additional units which, in quick succession, became operational. Operations of the Command were high-lighted by five main features: first, the *Scharnhorst-Gneisenau* escape incident; second, the extension of bombing operations to include the Nazi-controlled factories in occupied France; third, the great expansion in the scale of night raids, including such concentrated attacks as the 1,000-bomber forays on Cologne, the Ruhr and Bremen; fourth, the tremendous increase in mine-laying operations; and, finally, the introduction of daylight attacks by large forces of low-flying four-engined aircraft.

Scharnhorst and Gneisenau Attacked

The air operations against the *Scharnhorst* and the *Gneisenau*, which began in March 1941 when the ships took refuge in Brest, continued almost without interruption until they finally escaped under cover of low visibility and intense protection by fighters, shore batteries and flak ships in February 1942. In January and February the R.C.A.F. squadrons frequently participated in the continuous raids on the ships, but the customary bad winter weather militated against their success. In anticipation that some move might be planned by the enemy, aircraft all along the Channel were kept in readiness throughout daylight hours in case the vessels should attempt to reach their homeland by the shortest route. Finally, on the morning of February 12th, the signal came from the fighter boys that the German battleships, with *the Prinz Eugen* and accompanying escort vessels, were off the French coast near Le Touquet, well on their way to the safety of their home ports. At 1130 hours every bomber group was warned to be ready to get every aircraft possible into the air for attacks in successive waves and between 1330 and 1700 hours (1.30 and 5 p.m.) these waves were airborne to



1. S/L A. G. Deere, D.F.C. 2. W/C Fenwick-Wilson, D.F.C., and S/L R. C. Bisset, D.F.C. 3. W/C J. (Moose) Fulton, D.S.O., D.F.C.
4. Ground crew working on an R.C.A.F. Halifax. *Fox Photo.*
5. The crew of an R.C.A.F. Hampden going to their aircraft. *Keystone Press Photo.*



1. FS T. O. McIlquham, D.F.M. 2. F/L J. K. Tett, D.F.C. 3. S/L P. L. I. Archer, D.F.C.
4. A section of the Krupp Works in Essen after receiving the attention of the heavy bombers.
5. Sgt. K. W. Craig, D.F.M., and FS G. J. Strutt, D.F.M. 6. Sgt. F. J. Moritz, D.F.M.

search out the fleeing craft under almost impossible weather conditions of thick haze, low cloud formations and intermittent heavy rain showers. Hampered as they were by the elements, the bombers were frequently unable to make rendezvous with their fighter escorts, and three-quarters of them were, in fact, forced to abandon their mission after vain searches. Actually, only one in six of all the aircraft engaged were able to locate the warships and carry out attacks on them. Of these, the R.C.A.F. aircraft averaged slightly higher than the general run of the bombers, one-fifth of their number managing to bomb the enemy vessels. Others made fleeting contacts but lost sight of the target before an attack could be made. Four R.C.A.F. aircraft did not return from this extremely difficult and disappointing operation, which, however, did inflict additional damage on the already battered enemy ships and prolonged the period of their retirement from active service.

S/L D. S. N. Constance, a member of the R.N.Z.A.F. serving with one of our squadrons, captained one of the few crews who actually engaged the target. While bringing his Hampden down out of clouds at 2,000 feet, Constance was subjected to such severe fire from the battleships and their escort that serious damage, including the loss of the port aileron, was inflicted on the machine. Despite the damaged condition of his plane, the pilot, no longer able to take evasive action, completed his run over the ships and dropped his bombs from 800 feet, as he was assailed by everything that the Nazi gunners could throw up at him. The Hampden was hit repeatedly, the cockpit wrecked, the instruments destroyed, maps mutilated and the wireless equipment rendered unserviceable. Chances of getting home were negligible, but through the unremitting zeal and good work of F/O R. Van den Bok in repairing the wireless set and with skilful navigation on the part of P/O R. J. Hardingham, the pilot finally arrived back at the English coast. Both Van

den Bok and Hardingham received the D.F.C. for their part in this achievement.

Bombing Operations Extended

After the fall of France the policy of Bomber Command restricted the activities of its aircraft over the Nazi-occupied territory to attacks on the invasion ports and bases, leafletdropping raids on various cities and short-range daylight attacks, with strong fighter support, on specific targets of importance to the enemy's industrial or communications organization. No night attacks on industrial objectives were permitted, a condition which permitted the invaders to strengthen their effort considerably by the undisturbed use of factories in the conquered countries. Early in 1942 this unfortunate policy was reconsidered and attacks on factories known to be working for the Germans began. The first of these sorties was the attack on the Renault works at Billancourt, a suburb of Paris, when on March 3rd, under excellent conditions and with perfect visibility, four of our squadrons took part in a heavy raid and were able to get undisturbed runs to drop their load of 4,000-pounders from heights varying from 1,200 to 4,000 feet with telling effect, scoring direct hits on many buildings.¹ The devastation caused by this concentrated attack was fully verified by subsequent photographs. The French people are known to have been far from resentful of such destruction. Despite the efforts of the German propagandists to incite open denunciation of the British, in many instances the French openly expressed their approval of the new tactics being employed against their conquerors, which resulted in the shattering of this symbol of the much vaunted (by the Germans) collaboration on the part of the unfortunate French.

¹ During the attack on Billancourt more than 476 tons of bombs were dropped which compared favourably with the heaviest Hun assault on Britain, when 500 aircraft dropped 440 tons.

The bombing runs made in the Billancourt raid were so low that the aircraft were shaken and tossed about by the explosions and the crews could clearly discern the roofs of buildings and debris being thrown into the air. The whole area of the Renault works was one mass of flames and, to quote the words of one of the attackers, one section in particular was a "heap of debris and glowing ruins with many roofs visibly buckled and holed".

The second objective, following the change in policy, was the Matford works at Poissy, which, by virtue of its smaller size, required the most meticulous attention to bomb sights if the surrounding houses were not to be laid waste. The first attempt was made in daylight by a small force of Bostons, but the results were indecisive and on April 1st a much stronger force took over the job by night. Under conditions of perfect visibility and bright moonlight "almost as in daylight"—to quote one of the reports—the captains of the one Canadian squadron involved made their bombing runs from a low altitude in their Wellingtons and completed the destruction begun by the Bostons some days before.

Throughout the early months of 1942, Bomber Command continued its attacks on the vital economic centres of the Reich, and R.C.A.F. squadrons took part in these raids with the R.A.F. Hamburg, Bremen and Wilhelmshaven were singled out in January as the air forces gave a helping hand to the Royal Navy and Coastal Command in the intensifying Battle of the Atlantic. On one of these raids on Bremen, on January 17th, when S/L J. E. Fauquier dropped a 4,000-pounder on the target and saw it burst with terrific force in the town to the north of the docks, the Canadians had entered into another phase of bombing, and from then on 4,000-pound block-busters were frequently the freight carried by the R.C.A.F. squadron. The one dropped that night by Fauquier and the two dropped, also on Bremen, four nights later, by the same officer and W/C R. M. Fen-

wick-Wilson, were the first of the monster eggs to be laid by R.C.A.F. crews.

One squadron's records contain the following account of an incident which occurred on the latter occasion:

The enemy coast was reached without incident but at 15,000 ft. in the vicinity of Haselunne the aircraft was suddenly caught in a cluster of about 30 searchlights ... the power bolt was frozen solid. The pilot pumped the doors open and the whole load of 1 x loco and 2 x 500 lb. were dropped from 7,500 ft. After the lightening of the aircraft it was possible to get away from the lights and course was set for base. The wireless operator noticed that a vapour trail was being left and the pilot climbed. At 9,500 ft. the W/Op reported two Hampdens flown over the tail. The pilot thought they must have been Me. 109s and instructed the crew to keep a good lookout. A few seconds later the W/Op reported two aircraft attacking from the port quarter. The pilot turned to port and the attacking aircraft and the gunners both opened fire. The W/Op claimed to have shot down one Me. 109, but five bursts of cannon hit the plane. The pilot managed to evade the attackers and at 6,000 ft. with the starboard engine coughing called on the crew to bale out, but got no reply from them. At 1,500 feet the plane handled better and he decided to try to carry on to base, continuing slightly to the south on the course given to him by the navigator for Skegness in the hope of hitting East Anglia. No sign was given by the rest of the crew and arriving over England . . . the pilot circled flashing S.O.S. . . . There the undercarriage failed to work and the plane crash-landed. All the crew were found to be on board, though wounded. Sgt. (pilot) Farrow had a slight wound in the ankle, where a nut had been found under the skin. Sgt. Millward had a cannon shell wound in the leg but it is hoped it will not be necessary to amputate. Sgt. May and Sgt. Baker were so badly wounded that they died within 48 hours. In recognition of his courage and resolution the immediate award of the Distinguished Flying Medal to Sgt. James Phillip Farrow was approved a few days later by His Majesty the King. (Sgt. Millward was also awarded the D.F.M.)

The Ruhr is Attacked

In March the Ruhr was the principal target and on no less than five nights our squadrons paid visits to this most vital of all the Reich's industrial centres. Cologne was also bombed with telling effect and the month ended with a

most successful expedition against Lübeck, historic German port on the Baltic. The attack on Lübeck, on the night of March 28th, met with considerable fighter opposition between the German border and the target, but the defences of the city itself were only half-hearted and our airmen were able to make their runs from as low as 2,000 feet. With this co-operation, albeit unwilling, from the city's defenders, it is little wonder that the raid was productive of excellent results and when our machines turned homeward the glare of fires was so great as to prevent assessment of individual achievement. But there was no lack of verification of the efficacy of the incendiaries which had formed a large part of the bombers' loads. More than 3,000 houses were totally destroyed in the blaze, which was visible to our air crews for a distance of from 75 to 100 miles after they had left the former pride of the Baltic a seething, smoking mass of twisted and burning rubble.

Three times, during the first half of April, the Ruhr was again attacked in force and each time representatives of the Canadian bomber squadrons were over the target.. Two of these raids were carried out in unfavourable weather, severe icing conditions and electrical storms hampering the aircraft on one raid and cloud and smoky haze on the other, but the third was on a night with ideal weather for bombing and the results were heartening. A raid on Hamburg also encountered unfortunate weather, but under better conditions Dortmund was peppered on two successive nights and Cologne felt the weight of our bombs on another night.

The end of the month saw a most effective demonstration of the new tactics of "area offensives", when specific areas rather than widespread targets were singled out for attack. Under these new tactics a large number of aircraft would be concentrated on one spot and drop their bombs in rapid succession with a view to confusing and saturating the defences. That this new method of approach was successful is borne out by the fact that since that time most of

Bomber Command's raids have been of this type. From the point of view of the recipients our raids have been steadily increasing in "frightfulness" of the kind which they were only too happy to hand out in the early days of the war but find hard to take now that the initiative is ours. On four successive nights, April 23rd to 26th, the Heinkel works in Marienehe, a suburb of Rostock, were bombed with great effect. Only once before, on September 11th, 1941, had bombs fallen on this large establishment, which since the beginning of the Russian campaign had been turning out a steady stream of new and reconditioned Heinkel III bombers. On all four nights great fires were started when the weather was such that our machines, after carefully pin-pointing their objective, were able to make their bombing runs from an extremely low level. The second was the most spectacular of these four raids-though all of them were outstanding-and the glow of the fires could be seen from a distance of 70 to 80 miles. It is little wonder that in the opinion of one R.C.A.F. squadron this raid was "one of the most successful of all sorties". Only one Canadian plane was lost in these four attacks.

On the night of April 28th, Fulton led a large force against Kiel by the light of a full moon and had an encounter with a Me. fighter over the North Sea on the return trip. Fulton's Wimpy was badly damaged, with one blade of a propeller shot away, the rear turret shattered and the rear gunner wounded. Under the most trying conditions, FS E. S. Alexander, the observer, though wounded himself, attacked the shattered turret with an axe and moved the wounded gunner to comparative safety. The damaged propeller was causing so much vibration that Fulton was forced to cut the engine; he was unable to maintain height with one engine and came down gradually to within 20 feet of the sea. Risking everything in an attempt to make base, he restarted the port engine and despite the vibration regained sufficient height to scuttle over hedges and flop

down on his home aerodrome, in a successful "belly" landing. It was for this exploit that Fulton was subsequently awarded the D.S.O.—and Alexander received the D.F.M.

The 1,000-Bomber Raids

May 1942 was a month of almost continuous bad weather for any extended operations over the Reich, but another little pastime of Bomber Command, known as mine-laying, continued with almost machine-like precision. However, the last few days of the month were more kind and on May 30th the now celebrated phrase "1,000-bomber raid" was originated. Actually, 1,092 bombers took off on that mass attack on Cologne; every group in the Command was represented by every available aircraft, and the results were devastating. Fauquier, now a Wing Commander and the first R.C.A.F. officer to command a bomber squadron in the United Kingdom, led his Halifaxes with marked success and was accompanied by R.C.A.F. Wellingtons and the hardy-perennial Hampdens. If the weather man had been unkind during most of the month, he made up for it on the night of this raid, for the visibility was excellent, with a bright moon and no clouds to obscure the target. The first arrivals dropped their loads of incendiaries and later-comers were guided by the constantly increasing intensity of the resulting fires, the reflections of which could be seen from points 50 to 90 miles distant. The whole city soon was a mass of belching flames and a pall of smoke rose to 8,000 feet. The intensity of the attack and the weight of bombs dropped, coupled with the frequency with which bombers arrived over the area, made effective defence impossible and the invaders were so little annoyed by flak that one of them said on his return that it was "far more dangerous over England than over the target, owing to the number of aircraft" and another described the trip as a "piece of cake". The R.C.A.F. lost only one machine on this raid.

The Reich was not left long undisturbed, for two nights

later another 1,000-bomber raid was directed against the Ruhr, which was further attacked by smaller forces and in less spectacular fashion three times during the following week.

This interspersal among monster raids of others calling for a fewer number of airborne machines was essential if the effective striking force of the Command was to be maintained, since it is seldom that a bomber returns from a raid without being in immediate need of repair, either at the hands of the airframe or aeroengine mechanics, or both. Maintenance, quite obviously, is one of the most important factors in effective air fighting or bombing strength and without the most perfect co-ordination in the ground crew, continued widespread operation would be impossible.

Enemy Defences Are Strengthened

It was not to be expected that this continued attention to one series of targets could long go unnoticed, so it is little wonder that the last of the week's three raids ran into enormously strong opposition, and on June 8th every pilot had to resort to all the evasion tricks of which he was capable-and even pull a few rabbits out of the hat-to escape the seemingly impenetrable searchlight cones and the almost solid wall of steel thrown up by the anti-aircraft batteries. One Halifax pilot was forced to dive from 19,000 to 8,000 feet before he was successful in evading the defenders, while another dived from 20,000 to 900 feet before he finally shook off the expertly manipulated searchlight beams.

After these forays, Bomber Command took a rest and suspended operations for over a week. But on June 16th the bombers returned to their Happy Valley-the Ruhr, and a number of our aircraft engaged in this raid encountered considerable opposition both over the target and on the long trip home. One of them, piloted by FS M. L. Swanson, ran into trouble over Essen, when a piece of flak hit the rear end of the fuselage and forced the pilot to jettison his

bombs short of the target. The machine was struck again over Düsseldorf, and a third time just to the south of that city. Limping home with almost mortal wounds the Wimpy was hit again over Antwerp and the underside of the fuselage caught fire from the front turret to the navigator's table. To add to their predicament a twin-engined night fighter chose that moment to finish off the blazing aircraft, and during the encounter both the second pilot and the front gunner were wounded; the bomb doors dropped open; the wheels dropped down, and the aircraft, after stalling, fell from 15,000 to 200 feet before Swanson could regain control. FSs P. S. O. Brichta and K. E. Crosby, navigator and wireless operator, succeeded in stamping out the fire, after which Crosby made the wounded second pilot more comfortable, while Swanson, with the help of Brichta's skilful navigation, brought the stricken bomber to its base, little more than a wallowing mass of steel and rubber. All three flight sergeants were awarded the D.F.M. for the night's work.

Emden and Bremen Suffer

By way of a change, Bomber Command turned its attention to Emden and Bremen during the latter part of June. Both cities had been attacked in the sustained sorties of the early days of the month and both had suffered disastrous fires. On three of the four nights, June 19th to 22nd, Emden was bombed by medium sized forces which met some opposition not only from flak but also from night fighters. On the first of these raids, Sergeant F. J. Moritz, wireless operator air gunner, won the Distinguished Flying Medal when his aircraft was attacked by a Junkers 88 and both he and the rear gunner were wounded with the first burst. Moritz skilfully guided his pilot in the necessary evasive action and then, manning his own guns, fired burst after burst into the Ju. 88, probably destroying it. The attacking Junkers disposed of, Moritz gave first aid to the rear gun-

ner, then calmly returned to his wireless set, which he manned until the aircraft was safely back at its home aerodrome.

Less than a week later, on the 25th, the third of the 1,000-bomber raids took place, this time with Bremen as its objective. Though conditions attending the attack were less favourable than on the night over Cologne, not one of the R.C.A.F. bombers was lost, though several had hair-raising experiences. Fauquier, after dropping his bombs at 12,500 feet, dived his Halifax to within 200 feet of the ground, machine-gunned one of two searchlights to darkness and one of two light flak guns to silence. S/L D. L. Wolfe, of another R.C.A.F. squadron, turned his Wellington on a Me. ir0 night fighter and his rear gunner, Sgt. J. R. Morrison, shot it down. This monster attack was followed in close succession by three more on a scale which was smaller but productive of just as many thrills as the first. On the third, on July 2nd, the R.C.A.F. again mustered a large formation and our crews reported a very large fire in the middle of the city, surrounded by smaller blazes "like acolytes at an altar". In this raid, S/L L. G. D. Fraser, at the helm of a Halifax which was attacked by flak high over the Dutch coast, found his aircraft turned over by a burst under the right wing and the machine dropped to 3,000 feet before he could bring it under control and right side up again.

The Targets Are Changed

July also saw raids on Duisburg, Hamburg, Saarbrücken, Düsseldorf and Wilhelmshaven, on the last of which bursts were seen close to the submarine building yards. The fires that started were visible for over fifty miles. Duisburg was visited four times during the month, once on the 13th when visibility was poor and the effects of the raid mediocre. The other three, however, were uniformly effective and there was blazing testimony to the destruction wrought. On the night following the fourth raid on

Duisburg, July 26th, Hamburg got its turn and a strong force attacked in brilliant moonlight. One of the Halifax crews counted forty fires, which before the raid was over had merged into one seething, roaring mass of crimson orange and turned the whole city into a blazing inferno. Sixty miles away, the returning crews could still see the flames leaping up over the riddled city.

But these forays are not carried out without loss and our squadrons suffered casualties in both aircraft and men. One of the pilots, P/O D. J. Williams, after his crew had bombed their objective, had a hectic time when his Hampden was caught in a cone of sixty searchlights, and in the middle of a balloon barrage. Aided by the cone of light, the German gunners aimed their flak with uncanny accuracy, and-whang! the Hampden was over on her back. No sooner had Williams righted his machine and edged his way out of the balloon barrage than he was set upon by a Me. 109, and but for quick evasive action the R.C.A.F. Hampden would have been a dead duck. But Williams' thrills for the evening were not over, for as he was bringing his aircraft in to land one of the motors cut and he had to do a single-engine landing.

Another raid on Hamburg two nights later encountered impossible weather with severe icing. Many of the bombers had to turn back, but others struggled on through cloud, ice and heavy enemy opposition to drop their bombs on the designated objective. One crew shot out two searchlights and put a flak gun out of commission. Though our aircraft casualties, in numbers, were light, nevertheless the loss to the R.A.F. and R.C.A.F. was great, as following this raid, one of our ablest captains and squadron commanders, W/C J. Fulton, D.S.O., D.F.C., A.F.C., was missing.

The month ended with two signally successful nights against Saarbrücken and Düsseldorf, when the crews again saw their target a sea of flame and returned home with the certain knowledge that the sleep of a good many Nazis had

been rudely interrupted.

In August, Saarbrücken again had its turn and Duisburg stood in for Düsseldorf. Weather and local haze made it difficult to find the target over Duisburg, but thanks to the excellent work of the Pathfinder Force, that indomitable crowd of volunteers, who lighted the ground with their hundreds of flares, the bombs were dropped on schedule and the results were uniformly gratifying. At Saarbrücken large fires were started and photographs were taken of the damage. The month finished off with routine raids by small forces on Mainz, Düsseldorf, Osnabrück, Flensburg and Kassel.

During the month, after one of the smaller raids, one of our squadrons reported:

One of our aircraft which reached and successfully bombed the primary target encountered severe enemy action and flak both before entering the target and upon leaving it. About approximately nine minutes before target time, whilst doing his bombing run on the target, this aircraft was attacked by an enemy fighter which suddenly pounced upon our Hampden from out of cloud cover. The attack was so sudden that, before the W.Op./AGs could notice the enemy aircraft and take necessary action, the enemy fired with all guns at a range of approximately 50-100 yards. This attack took place at approximately 0230 hours, and the first sign of attack was when tracer bullets were fired at the Hampden from dead astern. . . . The pilot immediately put the Hampden into a deep diving turn to starboard, pulling out about 6,000 ft. and the attacking aircraft was lost from sight and not seen again. The two W.Op./AGs were unable to return the fire, at the time of the attack, owing to being thrown off balance by the unexpected violence of the attack. The attack was so fierce that the pilot's impression was that shells and bullets seemed to hit the aircraft everywhere. There were three large holes in the elevators, one in the port aileron, one large hole in the port tail fin, one huge rent at the intersection of the tail boom and the fuselage, another large hole in the bottom of the port engine nacelle, the top gunner's cupola was smashed and the magazines shot away from his guns, all port tanks were riddled, the hydraulics shot away and the sides of the fuselage seamed and scored by cannon shells. One cannon shell struck spar behind pilot's left shoulder in fuselage. The top W.Op./AG was wounded in this encounter and had shell splinters

imbedded in his scalp. His face was all scratched up by perspex and flying splinters and also had a deep cut in right hand caused by shell splinters which were later found to be imbedded there. The shock from the shell splinters knocked the W.Op./AG unconscious for approximately 30 seconds and, upon regaining consciousness, the pilot instructed him to change places with the 2nd W.Op./AG in the lower compartment, owing to blood streaming down his face and over his right hand from his wounds. Following this encounter and although badly shot up, the pilot attempted another run on the target and successfully unloaded his bombs as detailed. Approximately 10 minutes after leaving target, explosions were heard from the 'port engine and this one stalled completely, remaining absolutely dead for the remainder of the journey. At the time the port engine stalled, the aircraft was flying at 9,000 ft. and shortly after this the aircraft fell into a right spin which the pilot managed to pull out of at 4,000 ft. Once the aircraft was under control and flying at excessive speed, the pilot raised his altitude to 6,000 ft. and then instructed his crew to prepare for abandoning aircraft and a possible sea landing. Once over the sea the aircraft lost more height and it was only at 4,000 ft. that the pilot was able to bring the aircraft under control and keep it steadily at this height most of the way back. Whilst over the sea, the pilot's right leg became so tired that he was unable to hold the rudder any longer, and it was then that his navigator helped him by taking hold of the rudder bars with his hands, thereby taking part of the strain off the pilot. This the navigator managed to hold from there on until their crash landing at ... Station. No other member of the crew besides the first W.Op./AG was injured by this accident. All switches and gasses were cut off at 500 ft. as the aircraft was coming in to land, and an attempt was made at landing 75 yds. to the right of the flare path in order not to hinder either take-offs or landings which might have been taking place. As it so happened, an Oxford aircraft came in to land at about the same time as our own aircraft landed. The hydraulics being completely shot up, it was necessary to make a belly-landing and the aircraft came to rest in a sand dune.

The W.Op./AG, Sgt. Murray, was sent to Station, where pieces of the shrapnel, shell splinters and perspex were removed from his head and he is at present non-effective flying.

Both the pilot and the navigator were recommended for the award of the Distinguished Flying Medal and, on the 1st Sept. 1942, His Majesty the King, upon recommendation of the Air Officer Commanding-in-Chief, graciously approved the immediate award of the Distinguished Flying Medal to the pilot, RCAF/R. 76955 Sgt. Bell, R. G.

The names of this crew are: Sgts. Bell, R. G. (Pilot); Bell, J. K. (Nav.); Murray, J. S. (1st W.Op./AG) and Norman, A. (2nd

W.Op./AG).

A raid later in the same month was reported as follows:

On this night's operations, one of our aircraft piloted by RCAF/J. 6991 Flight Lieutenant D. J. Williams, D.F.C., was detailed to attack Kassel. At approximately 2240 hours at an altitude of 5500 ft. position 51.50N. 0735E., this officer was advised by his 1st W.Op./AG that an aircraft had been sighted on the green quarter at an approximate range of 2000 yds., this aircraft being identified as a Ju. 88. Acting under instructions from his W.Op./AG, this officer (pilot) so manoeuvred that he caused the enemy to dive under the Hampden, enabling the wireless operator air gunners in this officer's crew to fire long bursts at the Ju. 88. Just as the W.Op./AGs changed their magazines the Ju. 88 came swinging in with front guns firing but, the gunners being on the mark fired very long bursts and tracer was seen to enter the enemy aircraft. At this time the pilot put the nose down, at the same time turning to port, and as he did so the Ju. 88 ceased firing, climbed very steeply and turned sharply to port, this manoeuvre bringing him about 20 yards in front of this pilot who, when pressing the button of his Browning gun, noticed tracer enter the starboard wing of the enemy aircraft, and subsequently the starboard engine burst into flames. Following this, the Ju. 88 turned over on its back and went into a steep dive and the Hampden followed it down to approximately 3,000 ft. Shortly after this, it was seen to strike the ground and explode in a rain of flame. Following this attack the pilot proceeded on towards his target which was successfully reached and bombed and, as he was leaving the target area on his way home, a Me. 109 came up on his port quarter but, after a very long burst fired by the 1st W.Op./AG, the enemy aircraft swung away and was not seen again. This officer was awarded the Distinguished Flying Cross for this and other instances of determination and courage and the outstanding example which he has created by his keenness at his work. His flying ability, coolness and confidence are outstanding qualifications.

CHAPTER X

EARLY MINE-LAYING OPERATIONS

IN addition to its raids upon naval and industrial targets in Germany and occupied countries, Bomber Command lends a helping hand to the Royal Navy by laying mines in enemy waters. Thanks to the development of aircraft it is now possible to sow these deadly explosives in narrow restricted channels or in strongly defended areas, where surface or submarine mine-layers would find it extremely dangerous, even well-nigh impossible, to penetrate. The first mine-laying from the air carried out by the Royal Air Force in this war was performed by Hampdens off the coast of Denmark on the night of April 13th, 1940. Since then thousands of mines have been planted in far-flung areas from the Baltic Sea and the coast of Norway to the Bay of Biscay and the scale on which these operations are carried on has steadily increased. The full results of this campaign will not be known until the war is over, for the enemy does not cooperate to the extent of publishing his losses in merchant and naval shipping. Enough information has seeped through, however, to prove that the mine-layers' efforts are yielding definite profits-not only in vessels sunk or damaged but also in the enemy's diversion of both men and ships from other duties in his endeavour to rid the channels of the eggs dropped by our aircraft, and in the dislocation and delays caused in the movement of enemy vessels through the areas

exposed to mine laying operations. Visible evidence of the success of our campaign is found in the masts and funnels of sunken ships which mark the entrances to many an enemy-held harbour or line his coastal channels.

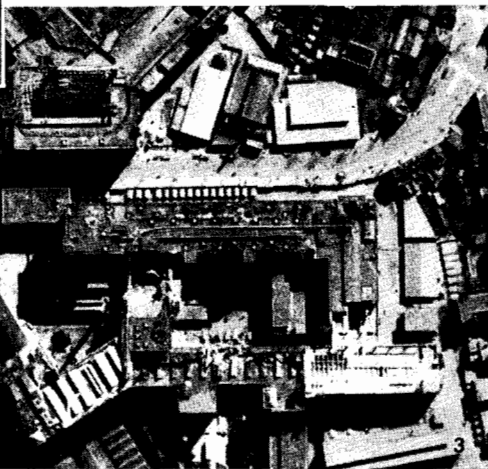
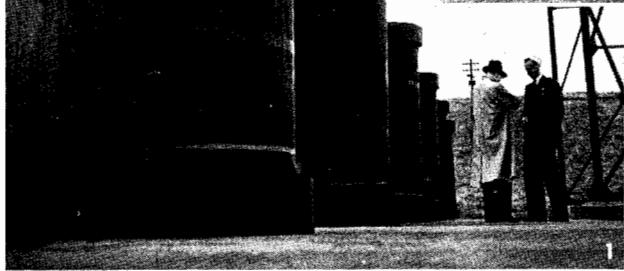
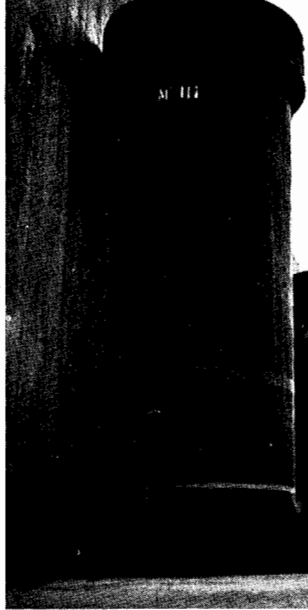
Mine-laying operations are normally carried out on nights when clouds afford a certain amount of cover for the aircraft. The chief responsibility for the success of such expeditions rests upon the navigator, who must be able to locate exactly the spot in which the mine is to be laid. Accurate navigation is therefore absolutely essential. Once the assigned area has been reached the pilot does a let-down through the clouds while the position is carefully checked by the navigator. From a low height the mine is released and as it drops clear a parachute, eases its fall into the sea.

Ordinarily, the operation is a straightforward job, but even a routine task may produce moments of thrill and danger. Sometimes the area is strongly defended by flak ships and coastal batteries, as well as night fighters. Thus the mine-layer may have to run a gauntlet of searchlights and intense anti-aircraft fire to reach the assigned position.

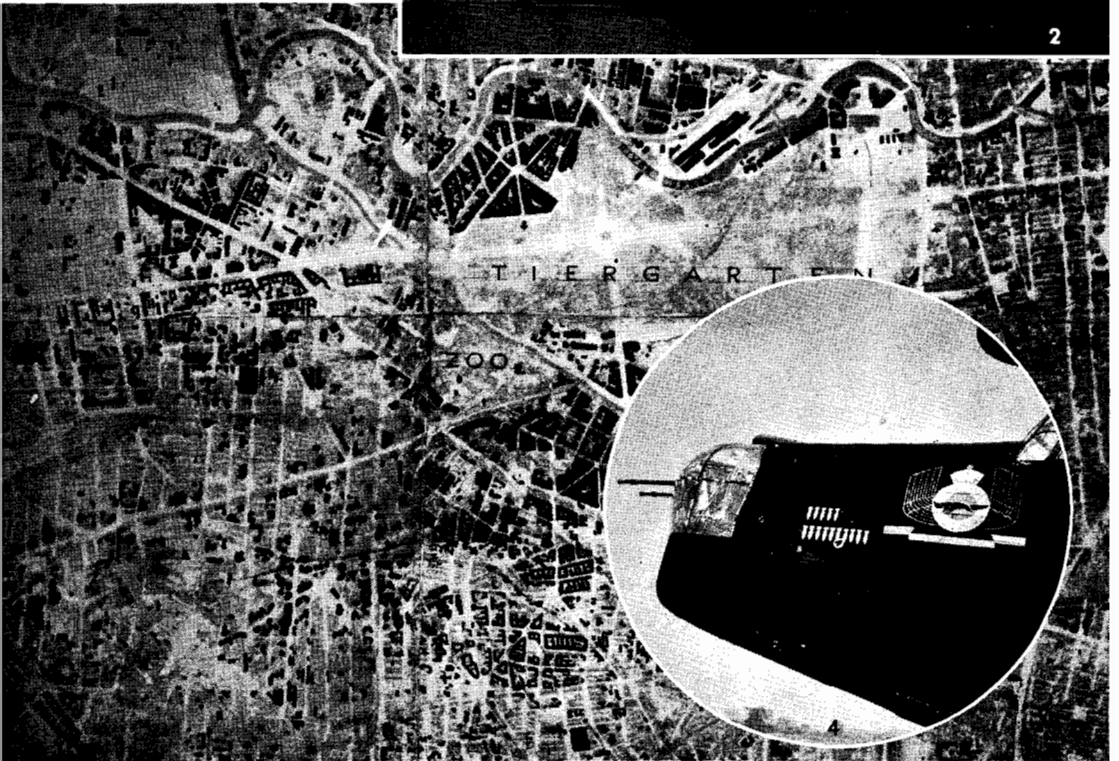
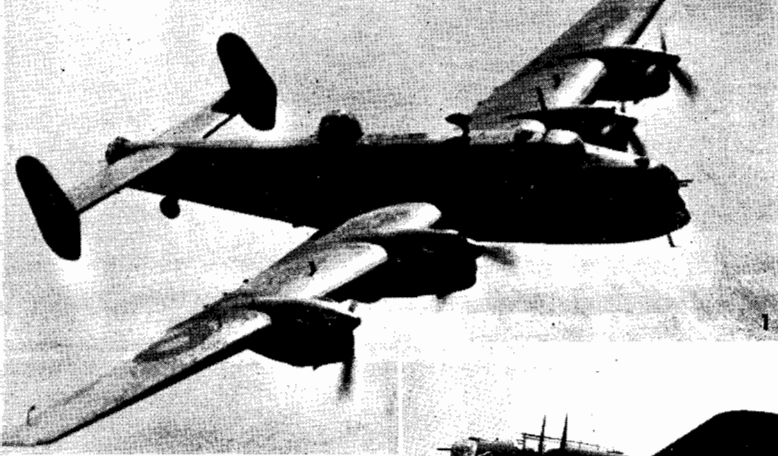
In the past the bulk of the mine-laying has been done by Hampdens carrying mines tucked away in the deep belly of the fuselage, while a pair of bombs for use against flak ships, searchlight clusters or similar targets nestles under the wings. Frequently they find other targets in anti-aircraft batteries, merchant vessels or perhaps an enemy aerodrome—in short, any installation of the enemy which would be the better for even temporary confusion. To-day, with the great expansion of Bomber Command's minelaying operations, many types of aircraft are used in the work, and as many mines may be laid in the course of a single night as were laid in a month early in the war. Time and again, 200 mines have been laid in one night.

Scope of Mine-Laying Increases

For more than two years R.C.A.F. bombers have had an



THE STORY OF A BOMB RAID: 1. 4,000-lb. block-busters awaiting disposal over Germany. 2. The men who carry them to the German cities. 3 and 4. Two examples of extensive bomb damage.



1. An R.C.A.F. Halifax. 2. An R.C.A.F. Lancaster. 3. A map of the central part of Berlin; buildings completely destroyed or very seriously damaged are marked in black. 4. The nose of an R.C.A.F. Wellington; each bomb denotes a successfully completed raid.

active part in the sea-mining campaign of the R.A.F. and the number of explosive eggs they laid in their first year was not far from the 500 mark. At first the number of aircraft involved was inconsiderable, but since the spring of 1942 this work has been a regular and important feature of our squadrons' activities. Precise details of the range or scale of these sorties cannot be disclosed but it may be said that they have planted mines in many areas-in Kiel Bay and the entrances to the Baltic, across Heligoland Bight and along the coastal waterways off the Frisian Islands and down to the U-boat routes in the Bay of Biscay.

Most of the missions are completed without incident, but there are occasions when crews are called upon to prove their skill, determination and courage to the full. On the night of November 4th, 1941, a number of R.C.A.F. Hampdens set out with a cargo of mines destined for Kiel Bay. The weather was bad-so bad indeed that only one of the group was able to reach its assigned area and plant its load. That one machine was piloted by Biggane, of whose exploits we have already written, with Sgts. W. L. Reinhart, J. I. Williams and L. Littlewood as his crew. After flying at 8,000 feet over solid banks of cloud all the way to the designated area, Biggane circled until he found a small gap, plunged through it to 1,000 feet and finding visibility good was able to fix his position as off Flensburg Fiord. As he turned down the coast to his particular pin-point, the beam of a searchlight caught him and two flak ships concentrated their fire on the luckless machine hitting it repeatedly. Notwithstanding the heavy fire, the pilot completed his run, followed by streaming tracers, dropped his mine in its allotted position and after jettisoning his wing bombs to lighten the load, quickly sought cover in the overhanging clouds. The damage to the aircraft was so severe that on landing in England at a base away from their home aerodrome the crew were forced to abandon their machine and thumb a ride home in another plane. Biggane had already estab-

lished himself as a most distinguished bomber pilot on many occasions, especially during a raid on Mannheim in August 1941. For this latest exploit he was awarded the Distinguished Flying Cross-the first to be won by his unit. Both Littlewood and Reinhart later received the Distinguished Flying Medal for their good work on this and other occasions.

But anti-aircraft fire and weather are not the only foes of the mine-laying aircraft. One night a Wellington, while on the way to its objective, was attacked by a Me. 109 and the gunners of the Wimpy were so successful in returning the fire of the faster and more manoeuvrable Nazi fighter that they were credited with its probable destruction. On the same night one of our Hampdens returned from its mission trailing a length of high tension electric cable from its star-board wing tip-it didn't pick that up at 30,000 feet! On another occasion a Wellington pilot banked his plane so steeply, in evading enemy flak, that he caught a wing tip in a mudbank and ripped it off. But the good old Wimpy limped home!

However, mine-layers don't always come back, even with a limp; but considering the advantages obtained from their work the loss of machines is small-and each man or machine lost has amply repaid the Hun before going for a Burton.

The efforts of the enemy to impede our mine-layers have not gone undisputed nor has the fight always been one-sided. Time and again, Wellingtons and Hampdens have struck back at their tormentors and their well-placed bombs have silenced battery after battery of flak guns and forced the searchlights to seek the shelter and futility of darkness.

CHAPTER XI

BOMBER OPERATIONS EXPAND

AT no time since the outbreak of the war was the enemy subjected to such a sustained and heavy hammering as was his lot during the first half of September 1942. In ten raids almost 5,000 tons of bombs, including some of the new 8,000-pounders, were dropped. In addition to these long-distance raids, the Command carried out extensive mine-laying operations in enemy shipping lanes. Aircraft from R.C.A.F. squadrons had a part in every one of these raids, though their mine-laying was limited to one night, when the coastal waters off Lorient were planted.

Saarbrücken was the first target on the opening day of the month and three Canadian squadrons had a part in the attack. Visibility was good and the fires started could be seen for sixty miles after the aircraft had turned for home. "The whole town seemed to be ablaze" was the story of one crew. On this occasion, one of our kites had engine trouble and the crew were forced to bale out. Three were killed, one was missing and the other three were rescued with slight injuries, after one of them (P/O L. A. Mason) had had to swim for nearly two hours before reaching land. Another R.C.A.F. aircraft was badly damaged by a Me. 110 night fighter but returned to base safely.

Karlsruhe was the target on the 2nd. Again, under con-

ditions of good visibility, the attack was most successful and fires were visible for from 75 to 100 miles. Photographs taken by reconnaissance aircraft the following day showed an area of over 270 acres laid waste. From this raid two of our crews were missing, including a squadron commander, W/C A. P. Walsh, D.F.C., A.F.C., who had also participated in the raid on Saarbrücken the previous night. The next night was a stand-down, but the 4th saw an expedition take off for Bremen. Canadian Halifaxes and Wellingtons went with the raid and in the well-defended target area one was lost, while a second was caught in a searchlight cone and received some damage by flak. The fires started in Bremen were still blazing furiously twenty-four hours later.

Duisburg was the victim on the night of the 6th, during which one of our Halifaxes, *H for Harry*, captained by FS R. G. Fernyhough, had its starboard outer engine damaged by flak. Righteously indignant, the Hally promptly turned over on its back and dived 700 feet before it could be brought under control. During the manoeuvre, the searchlights found it and every light in the district coned,, whereupon the front gunner opened fire, extinguishing some of the searchlights. Regaining control, Fernyhough completed the flight and landed at base without further incident.

Two nights later, Frankfurt had its turn, when the strong attacking force included a good representation of R.C.A.F. kites and, despite the very evidently increased defences, which included from 200 to 300 searchlights, the city was well and truly pranged. The last crews to attack reported on their return that the fires were as bright as the searchlights. During this raid, Sgt. W. E. Murray, captain of *J for Johnny*, had his starboard outer engine fail 20 minutes before reaching the target. Continuing on his course with three engines, Murray bombed the primary target and returned safely to base.

On the night of the 10th, with Düsseldorf as their objec-

tive, Bomber Command were again out in force. This time two of the Canadian machines were badly damaged by very active and accurate flak. Two of the crew of one Halifax baled out over Germany but the captain regained control and nursed his kite back to base. Unfortunately his controls were badly damaged, with the result that he crashed into another aircraft in landing and one of the wireless operators was instantly killed, the other members of the crew escaping serious injury. Despite the strength of the defences the target was bombed with good effect and tremendous damage was done, with 370 acres in ruins-as testified by the photographic reconnaissance planes the following day. Which, after all, is no more than should be expected, for this was the heaviest raid sent out on a moonless night up to that time.

Bomber Command's attention returned to Bremen on the night of the 13th when, under conditions of no moon and a heavy ground mist, the first arrivals located their target by means of flares and soon had fires burning to guide the incoming Halifaxes, Stirlings, Lancasters and some of the old twin-engined bombers, all of which dropped incendiaries and some of the heaviest highexplosive bombs. Columns of smoke were soon rising to a great height and drifting out to sea. One of the Halifaxes, piloted by FS N. D. Daggett, while near Den Helder met a formation of enemy night fighters fitted with nose searchlights. Three Jerries made a converging attack from each side and astern-the latter being met by a hail of lead from the rear gunner, who put out the searchlight of his victim and saw it dive away steeply with a glow in its fuselage. The mid-upper gunner drove off the starboard Hun after putting out its searchlight while the third attacker, realizing that discretion was the better part of valour, high-tailed it for home. One of the Canadian Wimpies, piloted by FS A. J. G. Cameron, was twice hit by flak and had its fuel tanks pierced. Unable to maintain height, Cameron was finally forced to ditch in the

sea three miles off Southwold. All members of the crew were saved except the second pilot, Sgt. A. Donlin, who was unable to reach the dinghy. W/C L. G. D. Fraser at the helm of another kite had engine trouble on the outward leg but continued on his course, bombed the target, and returned to base despite the fact that he was strongly attacked by a Jerry night fighter and his rear turret was unserviceable. This was not the first time that Len Fraser had shown outstanding airmanship in evading night fighters under difficult conditions, and he was decorated with the D.F.C. following this sortie. So heavy was this attack that the German press departed from its usual custom of belittling the effects of R.A.F. raids and termed the attack a "terror" raid, frankly admitting very serious damage to property and heavy civilian casualties.

The Ruhr was the objective of the next attack, on the night of the 16th, when a force considerably larger than usual, both in numbers and in bomb-carrying capacity, took on the job. All the way to Germany the crews flew through thick clouds and over Happy Valley, in addition to the usual industrial haze, a ground mist impeded the task of the crews in identifying their targets. The enemy's Ju. 88 night fighters were augmented by forces of FW. 190s, Me. 109s and 110s, and many of the raiders had to fight their way through extremely strong opposition. Assisted by the guiding flares and markers of the Pathfinders, the main force came in and set fire after fire going, in the midst of which a tremendous explosion was seen. Casualties that night were very heavy-39 aircraft in all, of which one was from the R.C.A.F. Six members of the missing Canadian crew were later confirmed by the International Red Cross as having been killed and the seventh, P/O L. E. Kropf, a wireless operator air gunner, escaped from the enemy and found his way back to England. Kropf was later decorated with the Distinguished Flying Cross.

Three nights later a smaller force attacked industrial

centres in the Saar valley again, to end a period of great activity in the Command, during which ten heavy raids had been carried out in nineteen nights, with a loss of 138 bombers. In the tenth raid, several explosions, followed by heavy black smoke, suggested that a series of oil tanks had been hit.

During the latter half of the month, weather conditions precluded any extensive operations and one raid on Flensburg was the only operation in which R.C.A.F. Halifaxes had a part.

Air Ministry and the Admiralty, in a joint announcement at this time, drew attention to the importance of mine-laying operations and the results achieved therefrom. The text of the announcement follows:

During the past six months the Royal Navy and the Royal Air Force have laid a greatly increased number of mines in enemy waters. The enemy's shipping losses have been proportionately great.

Mine-laying is necessarily conducted in secrecy. The enemy makes every effort to conceal the losses which our use of this weapon has caused. It is not in the public interest to disclose the exact extent and scope of our operations, nor can the number of enemy ships known to have been sunk by mines be revealed. But it may be stated that the numbers of German and Italian ships known to have been sunk by mines fully justifies the effort expended by the Royal Navy and the Royal Air Force. There is good reason to believe that for every ship known to have been sunk by mines at least one other has been lost without information of its sinking having been received in this country.

The indirect effects of this campaign are equally important. The enemy's resources of man-power and tonnage are diverted to the operation and maintenance of large numbers of minesweepers. Our mines have also dislocated and delayed the enemy's sea-borne traffic. Traffic is thereby forced into areas where it is often vulnerable to other methods of attack; the already overloaded German railways have to carry still more freight as the result of the loss of supply ships. Since the first operation by our mine-layers a few hours after the declaration of war, minelaying operations have progressively increased and great numbers of mines have been laid to protect our coasts and shipping. Mines have been laid in enemy waters by aircraft of the Royal Air Force and the Fleet Air Arm and by fast light craft and submarines. In those waters

inaccessible to our surface craft and submarines, increasing numbers of mines have been laid month by month by aircraft of the Royal Air Force. Units of the Free French Navy, the Royal Netherlands Navy, and the Royal Norwegian Navy have joined in these activities with distinction.

Since the beginning of the war the number of mines laid by our forces in all theatres of war runs into six figures. Aircraft have laid mines in the Kiel Canal and in the closely guarded waters of the Baltic, and together with surface craft and submarines, they have laid mines in all the enemy's shipping channels from Norway to the Atlantic coast of France.

In the past six months many more mine-laying sorties have been made by aircraft of the R.A.F. than in all the previous months of the war. In the past 15 months these aircraft have flown some three million miles while engaged in mine-laying. It is known that mine-laying from the air in channels inaccessible to our naval forces has caused the enemy many heavy losses. Such constant penetration of the enemy's defences has not been made without loss.

Unlike bombs, shells, torpedoes or depth charges, individual mines cannot be aimed at specific targets. They must be laid in numbers to await their victims. The degree to which our mines form a potential danger to the enemy is a measure of the constant battle of wits waged by our scientists and technicians on the one hand, and the enemy mine-sweeping organization on the other.

To those engaged in the manufacture of mines, and in the hazardous and unspectacular task of laying them, is denied the satisfaction of being personally identified with any specific success against the enemy. Nevertheless, whether in laboratory or factory, aircraft or mine-layer, they maintain a front on which their achievement, although invisible to themselves, causes the greatest embarrassment to the enemy.

October

October saw the addition of another squadron to the R.C.A.F.'s operational forces, with a consequent increase in the efforts which could be made.

The first attack of the month, against Flensburg on the ist, was the most costly to date for one of the Canadian squadrons. Eight aircraft took off, and three failed to return. The whole Command lost 12 kites that night as a result of the extremely heavy defences of this most important submarine yard, which perforce had to be attacked from a low

level. P/O C. W. Palmer was decorated with the D.F.C. for his work in this raid when, despite intense searchlight activity over the target, he pressed home his attack, after which he dived to give his gunners an opportunity to machine-gun the searchlights. Having put out several of the searchlights, Palmer continued on his homeward journey at the same low level, to give the gunners an opportunity to let off steam—and a considerable number of rounds—at various ground targets.

The Rhineland was next on the following evening—but unfortunately conditions were unfavourable and the attack was not too well concentrated on the objective. Halifax *L for London*, while diving over the target area from 11,000 feet, received a burst of flak under the port wing just as one of the starboard motors packed up. The pilot, P/O J. H. M. McIntosh, was unable to regain control until he was within 100 feet of the ground and flew back to base at 500 feet.

On this day, confirmation was received that F/L G. C. Fisher and F/O R. Van den Bok, who had been lost over Belgium on the night of August 28th when flying with the late W/C J. D. Twigg, had made their escape and had arrived at Gibraltar. Fisher received the D.F.C. and Van den Bok a bar to the D.F.C.

One of the R.C.A.F. squadrons operating during this month was a French-Canadian unit, which had been formed under the command of W/C J. M. W. St. Pierre, and made its first operational sortie on the night of the 5th, against targets in western Germany. One flight in this squadron was commanded by S/L Georges Roy, son of the former Canadian Minister to France. The operation was undertaken under the most difficult weather conditions, with severe electrical storms and winds which tossed the giant bombers around like chips in the sea, to say nothing of severe icing conditions and intense cold.

On the following night, the weather was somewhat better for the foray on Osnabrück, a key railway centre of the

Ruhr and one of the most concentrated targets in Germany with 90,000 people crowded into its four square miles of streets. The Pathfinders' flares illuminated the target and gave excellent support to the main force, despite cloud and industrial haze over the target. Large fires, which were visible to the returning crews for more than 80 miles, were started. All but six of the bombers returned. One of those lost was a Canadian Halifax.

A week's bad weather gave the bomber boys a breathing spell and it was not until the night of the 13th that they again took the air in force. A very large force, including an unusually large number of R.C.A.F. aircraft, dealt the heaviest blow to date on the great German naval base of Kiel. So concentrated was the attack that the very heavy defences of searchlights and flak were gradually overcome, until, at the end, most of the guns were silent and control of the searchlights was so demoralized that they merely waved aimlessly in the sky. Even the thick smoke screen, which is invariably resorted to when the R.A.F. is in the offing, was not sufficient to blot out the bombers' objective, and flares which were dropped in hundreds lit up the scene so well that the target was visible to oncoming bombers long before they reached the aiming point. And when the fires added their illumination, individual buildings could be picked out without difficulty. One of the attacking R.C.A.F. machines, captained by Sgt. G. T. Chretien, was hit by heavy flak when approaching the target and the pilot wounded in the neck. Despite intense pain Chretien remained at his post, ordered the bombs jettisoned and manoeuvred his aircraft away from the target area. On the return journey Sgt. T. E. Carlon, the navigator, tended his skipper's wounds while continuing to navigate the aircraft. When nearing their base Chretien again took control and made a good landing on his home aerodrome. Both airmen were rewarded with the D.F.M. for their display of "high courage and devotion to duty".

The raid on Cologne on the night of the 15th, which was incidentally the 110th of the war and the first since the 1,000-bomber raid of May 30th, was the last raid of the month in which all R.C.A.F. squadrons took part. Taking off in good weather the raid ran into unexpected and most unpleasant weather conditions, which virtually obscured not only the primary target but almost all the Rhine Valley, with the result that observation of bombing results was difficult. However, it is known that the effect was not as concentrated as had been the case with earlier raids-especially that on Kiel a night or two before.

The last operation of the month in which R.C.A.F. squadrons participated was the attack on Genoa, Italy's great northern port and naval base. This was the second in a series of heavy blows struck at Italy in conjunction with the attack by the Eighth Army. The previous attack, in which no R.C.A.F. squadrons participated, was made on the night of the 22nd. In the second raid, the first aircraft over the target found clear weather and bombed with good effect, while later arrivals found clouds obscuring the area but the reflection of fires beneath served as a target marker. The Italians offered little opposition from ground defences and only one night fighter was seen-travelling in the opposite direction! The 1,500-mile flight was successfully accomplished by all our aircraft.

In the latter part of October, R.C.A.F. Wellington squadrons were briefed several times for daylight operations, but weather conditions conspired against them and only two attempts at raids were made. One of these was on the 23rd, when the Rhineland was the target, but owing to the thinning of cloud cover the majority of the attackers jettisoned their bombs and turned back. No results of the bombing were observed. The second objective was Emden, on the last day of the month, but again no results could be observed. During the month one R.C.A.F. squadron was detached from Bomber Command to Coastal Command for

an indefinite period, but in November several new squadrons were formed.

November

During the first five days bad weather forced the cancellation of all operations. On the 6th a daylight attack on Wilhelmshaven, under cover of low cloud, was made by Wellingtons. One aircraft, captained by P/O J. A. T. Doucette, was intercepted and badly damaged by three enemy fighters on the outward flight, and Sgt. J. Bruyere, the wireless operator, sustained a broken leg and wounds in the chest, arms, forehead and left hand. Another member of the crew, in going to Bruyere's assistance, stepped on the escape hatch and fell through, but the wounded man caught hold of him and helped him back to safety. Following the engagement with Jerry fighters, Doucette flew on and attacked the target and Bruyere, despite his serious wounds, advised his colleagues throughout on the operation of the wireless equipment. For their "indomitable courage and unswerving devotion to duty under extremely difficult conditions", Doucette and Bruyere were awarded the D.F.C. and D.F.M. respectively.

November 9th saw the first night operation on Germany for twenty-five days, when Hamburg was bombed by a strong force under unfavourable weather conditions. The aircraft were forced to fly through heavy cloud and, with the thermometer dropping to below zero, icing conditions were severe. Visibility over the German coast was poor, and thick clouds made it impossible to assess the result of the attack, although a considerable tonnage of bombs was dropped.

Following the attack on Hamburg, Bomber Command returned its attention to Italy and, on November 15th, Genoa was attacked for the sixth time in three weeks. In the six raids on this city only seventeen aircraft were lost, due no doubt to the poor ground defences and the fact that few

night fighters could be spared for the protection of this vital northern area. Actually, three of the raids-each involving a round flight of 1,500 miles and a double crossing of the Alps-were made without the loss of a single aircraft. These attacks on Genoa in November did not include R.C.A.F. squadrons, but the Canadians had a part in one of the two attacks on Turin which were made on November 18th and 20th. It was in the latter that the R.C.A.F. squadrons participated and under good weather conditions the city was bombed with great effect-so great, in fact, that after less than half an hour's bombing with 4,000-pounders and incendiaries the city was completely obscured by smoke. The intensity of the attack was so great that one 4,000-lb. bomb was dropped every minute and a 30-lb. incendiary every second. In this, the 21st raid on Turin, one column of smoke rose to 8,000 feet. So dense was the smoke over the target area that one Halifax captain had to make three bombing runs before he could find a clear space amid the fires, in which to drop his bombs. Eight days later Turin was attacked again, but this time without R.C.A.F. squadrons. The attack is notable, however, as the first occasion on which Italy got a taste of the new 8,000-lb. bombs.

The 22nd saw Bomber Command's attention revert to Germany for the first time in approximately two weeks. Stuttgart is one of the Hun's most important centres of war production, noted particularly for submarine and aircraft engines, magnetos and ignition parts made by Bosch, engines for Messerschmitts and Heinkels, tank engines and heavy lorries made by Daimler-Benz and precision instruments manufactured by Hirth. It is, in addition, an important railway junction for traffic to the south and to Italy and has extensive marshalling yards. The first aircraft on the target found visibility restricted by thick patches of cloud, which later drifted away, giving a clear view to the other waves of bombers. Many of the pilots came below the cloud base to bomb, and so successful was the attack that

the light from the blazing fires could be seen for 150 miles. Four of our Wellingtons were damaged by flak, with the result that one which had received a direct hit on the nose while flying over Paris had to crash-land at base, fortunately without injury to the crew.

Mine-laying operations were a large part of the work of Bomber Command during November. Weather conditions throughout were generally unfavourable, but on many occasions the R.A.F. and R.C.A.F. squadrons successfully dropped mines on pinpoint.

December

December, despite unfavourable weather, saw eight night attacks on Germany and three on Italy, together with extensive mine-laying operations and four daylight attacks on Germany. The Command raided the occupied countries on ten days and one night. Squadrons which were not operational sent some of their pilots on operations as second pilots with air crews of other units. As such they took part in raids on Mannheim on December 6th, Turin on the 9th and 11th and Duisburg on the 10th. During the month R.C.A.F. squadrons made 119 operational sorties, the majority of which were mine-laying, and lost only two aircraft.

The first operation of the month was a raid on south-west Germany on the night of the 6th when a considerable number of R.C.A.F. aircraft took part. The bomber force, composed of Lancasters, Halifaxes, Stirlings and Wellingtons, had fair weather for their outward journey but were unlucky enough to find the target area completely covered with thick low-lying clouds, so that it was virtually impossible to assess the results of their attack. Two enemy fighters were destroyed and nine of our bombers were missing, one of which belonged to an R.C.A.F. squadron.

R.C.A.F. squadrons participated in the second of the three raids on Turin which took place on the 8th, 9th and 11th of the month. The attack in which the Canadians took

part was extremely concentrated and all the bombing was carried out in 55 minutes. So intense was the bombing and so successful was the aiming that after the raiders had crossed the Alps on their homeward journey they were still able to see a dull red glow in the sky. The first wave to arrive at Turin was hampered by smoke from the attack of the previous night, lying low over the target, but by the time the raid had reached its peak the glare of fires was so brilliant that even the river was difficult to pick out and a pall of smoke rose to a height of 8,000 feet. The Italian press admitted great damage.

The next night raid was carried out against Duisburg, the largest inland port in Europe, on the 20th. This, the fifty-sixth raid against Duisburg, took place on a fine night in bright moonlight, which, combined with a large number of flares and the ineffectiveness of the defences, permitted our crews to identify the targets without difficulty and to concentrate their bombing. Despite the activity of numerous enemy night fighters, the raid was very effective and caused much damage in the vicinity of the docks and a great many fires were started in the industrial area. December 22nd saw a daylight attack on northwest Germany, but over much of the area attacked there was a solid bank of cloud and low visibility, and no results of the bombing could be observed.

Mine-laying was attempted during seven nights, but due to the unfavourable weather only about fifty per cent of the attempts were successful.

Canadian Bomber Group Begins Operations

January 1st, 1943, was a history-making day for the R.C.A.F., for at 0001 hours on that day the R.C.A.F. Bomber Group came into being, under the command of Air Vice-Marshal G. E. Brookes, O.B.E.

There was no ceremony connected with the opening of the new Group. Operationally all that happened was that

the bomber stations which made up the Group, and which formerly operated under R.A.F. command, began to take their orders from the new Group H.Q. at one minute past midnight on January 1st, 1943. For other reasons January was significant: because during the month Berlin was bombed four times-for the first time in daylight; because it saw the opening of the United States Eighth Air Force's offensive against Germany; and because a greater weight of bombs was dropped on the Reich and occupied territory than in any preceding winter month. During the month, 16 day bombing raids were made by the R.A.F. and U.S.A.A.F., as well as 19 night attacks. Of the total, 20 were on Germany and those on the targets in occupied territory ranged from Scandinavia to Bordeaux.

It should be noted that many of the January targets were obviously selected because of their connection with U-boat warfare, either from a constructional or an operational point of view. Thus it is not surprising that on five nights R.C.A.F. bomber squadrons attacked Lorient, a base essential to the smooth running of the German submarine campaign, owing not only to its strategic position but also because it provides accommodation for twenty or more U-boats. From Lorient the U-boats can reach the Atlantic shipping lanes without having to enter the intensively patrolled waters off the British Isles. And apart from the actual submarine pens at Keroman, there are drydocks, stores of weapons, fuel and machinery, barracks for crews, railways, power stations and service installations of all kinds. The first attack on this key base was delivered on the 14th, with a relatively light force and under conditions of heavy cloud until the bombers reached Lorient, when the cloud cover suddenly disappeared and our aircraft were able to pick out their targets in bright moonlight. Both light and heavy flak were intense but, despite this, great fires were started in the target area.

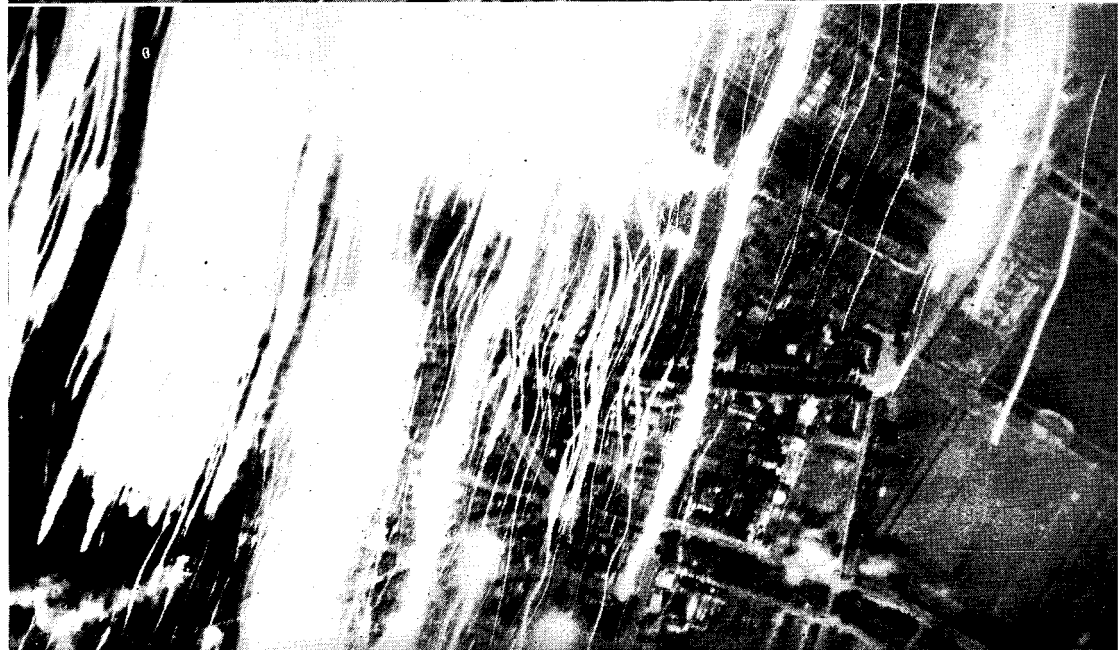
The second raid on Lorient took place the following

night and was carried out by a much larger force. Visibility was again good, but smoke from the many fires soon obscured details of the target, and our crews reported that by the end of the heavy raid Lorient was a blazing mass, the reflection of the flames being visible for 70 to 80 miles. On this raid W/C H. M. Carscallen, leading his squadron on its first operation, encountered two enemy night fighters at which his gunners fired bursts. The third raid, which was on the 23rd, was carried out by a small force but in face of negligible local defences. Fires, which were visible 150 miles away, were started on the docks, and it is believed a large ammunition dump was blown up. The next attack on the base was on the 26th, when the whole raid was concentrated into one hour but despite good visibility results were more scattered. While local defences were somewhat more active, good fires were started in the town and dock area and only two of the Canadian planes were lost. The fifth and last raid of the month on Lorient was made on the 29th, under impossible weather conditions. Severe icing, 10/10th cloud, rain, electrical storms and zero visibility militated against its success, so that the raid was largely abortive. Bombing was done almost entirely on E.T.A. and no observation of the results was possible. Flak was intense and accurate and served as a bombing guide for some of the crews, while several enemy night fighters were in the air and one R.C.A.F. Wimpy was pursued all the way to England. Two R.C.A.F. aircraft were missing after this operation.

The outstanding incident of the night's work was reported by Sgt. R. M. Buie, captain of *P for Peter*. While still over the target area after dropping his bombs, Buie had to take violent evasive action to avoid the concentrated flak fire. While doing so many of the wireless instruments went out of commission, then the engines stalled and the aircraft began to spin. The spin became so violent that the pilot's escape hatch was blown open and the cabin door twisted from its hinges. Snow and sleet lashed into the cockpit, cut-

ting the pilot's face; the navigator tried in vain to close the escape hatch, almost freezing his fingers in the attempt. Nevertheless Buie pulled out of the spin at 7,000 feet only to discover that several of his petrol tanks had been holed by flak, leaving so little fuel in the reserve tanks that there seemed little chance of returning to England. However, a tail wind helped them out, and the crew finally reached the British coast. With cloud covering the ground, fuel running low and wireless unserviceable, the captain ordered his crew to bale out. All landed safely, while the Wellington crashed near Winterslow and burned out.

In addition to these five operations against Lorient, R.C.A.F. squadrons carried on mining operations on eight nights during the month, but with two exceptions they were small and unimportant efforts. The expedition on the 2nd was hampered by intense cloud and only fifty per cent. of the aircraft airborne were successful in obtaining visual pinpoints. On the night of the 9th a large-scale mining operation was carried out under favourable weather conditions with clear sky, bright moonlight and good visibility. Pinpointing was not difficult and designated areas were mined most successfully. Enemy defences were active and flak ships were particularly objectionable. The list saw the second large-scale mining effort carried out, also under conditions of good visibility, in the same area. Several of our aircraft were damaged by flak, both from ships and island defences, but were able to return. However, three were lost. Weather conditions upset many daylight operations planned for January and on only three occasions were the R.C.A.F. bombers able to go out. The first attempt, on the 15th, was directed against Norden, north of Emden, but the cloud cover gave out before the target was reached and only one of our aircraft attacked. A week later, on the 23rd, a small raid on targets in northern Germany was undertaken, but was only moderately satisfactory. January 30th saw the close of the month's activities with another day-



"DURING AND AFTER": Pictures of the first 1,000-bomber raid on Cologne, May 30, 1942. The upper picture, taken by the light of bombs and fires by one of the attacking aircraft during the early stages of the raid before the ground defences were saturated, shows flak, tracer-bullets and searchlights, as well as the first fires beginning to take hold. The lower photograph, taken by reconnaissance aircraft some days later, reveals the extent of damage in just one section of the city.



St. Nazaire, France, showing the extensive submarine pen south of the harbour basin, and heavy bomb damage.

light operation against the same area. The raid was carefully timed so as to interfere with the broadcast of speeches by Marshal Goering and Dr. Goebbels, which had been announced as part of the ceremonies to mark the tenth anniversary of Hitler's rise to power. Coincident with this important raid, Mosquitos created *a contretemps* (embarrassing to the Nazis but amusing to us) by appearing over Berlin at the moment that Goering was about to speak. The bomber raid was not wholly successful as many of the attacking Wellingtons ran out of cloud cover and were forced to return. One of the aircraft, captained by P/O S. L. Murrell, ran into serious fighter opposition but despite the lack of cloud cover continued on its flight and dropped its bombs from 2,000 feet over a town believed to be Westerstede, north-west of Oldenburg. On the return flight Murrell's Wimpy was again intercepted and subjected to attack by two Me. 109s for over fifteen minutes. The Wellington's gunners finally got an opportunity for a good burst and scored strikes on one of the attacking Messerschmitts. The second was also driven off with smoke pouring from the fuselage. But the Mes. had nearly succeeded in taking toll of the Wellington, when their cannon shells started a fire behind the navigator's seat, which, fortunately, the crew were able to extinguish and the aircraft was brought safely to base. For the "keenness, determination and fine fighting spirit" shown, Murrell was awarded the D.F.C.

February

February operations continued the activity against German U-boat bases. In what was probably the heaviest month's bombing of the war, Bomber Command made nineteen night raids on Germany and sent two strong forces to annoy the Italians, while fifteen daylight attacks on Germany and occupied territory were made by the R.A.F. and the U.S.A.A.F., in addition to a considerable schedule

of mine-laying.

On the 2nd, 14th and 26th Cologne was the target and in the last two of these operations R.C.A.F. squadrons had a part. On the 14th, despite a pall of thick cloud over the target, the raiders were able to concentrate a very heavy attack in half an hour, thanks to the efficiency of the target indicators dropped by Pathfinder Force. One of our bombers, captained by Sgt. L. G. Wilson, was picked up and followed by a Me. 109 night fighter which finally closed in to 250 yards and fired a short and ineffective burst. The Messerschmitt then broke away quickly but returned for a further attack when Sgt. W. H. Watson, the rear gunner of our aircraft, fired two long bursts which were seen to enter the nose of the enemy machine before it burst into flames and dived steeply through cloud. On this raid the R.C.A.F. suffered a serious loss when W/C S. S. Blanchard, one of the most highly regarded commanding officers in the force, did not return. Another Canadian aircraft, piloted by F/L R. H. G. Boosey, bombed the target successfully but on the return journey both the navigator's intercom. and the rear gun turret went u/s. Despite these difficulties Boosey brought his aircraft safely over base, where the port outer engine caught fire as he was making his approach and the port inner engine stopped when the aircraft was at about 300 feet. But even this added complication was not sufficient to daunt the pilot, who climbed to 900 feet and ordered his crew to abandon aircraft. With complete disregard for his own safety Boosey then made a successful crash landing, and for his skill he was awarded the D.F.C. The last raid of the month on Cologne, on the 26th, was the heaviest since the 1,000-bomber raid. So concentrated was the bombing that crews said the searchlights seemed dim in comparison with the glow of the incendiaries. One pilot reported that after a quarter of an hour the entire target area seemed merged into one great fire. Unusual for this district, which is noted for possessing some of the strongest ground defences in the

Reich, the protection afforded the city seemed half-hearted. But night fighters were active both over the target and along the route and several engagements occurred with Ju. 88s, Me. 110s and Do. 217s. Sgt. J. A. Ferguson's kite was subjected to three attacks from dead astern and below by a Do. 217 on which the rear gunner fired four bursts, claiming hits in the wings and driving off the marauder. In addition, the crew, of the Ferguson aircraft sighted six single- and twin-engined Jerries which did not attack. S/L E. G. Gilmore's aircraft was badly shot up over the target area and three of the four engines went u/s. The hydraulic gear for the wing bomb door ceased to function, the rear turret doors jammed, the astro-dome was blown off and all the navigation charts were lost. When the bomber went out of control and considerable height was lost Gilmore gave the order to abandon aircraft, but as the engine then began fortuitously to show signs of life he rescinded the order. Navigation on the homeward journey was assisted by radio fixes and by the skilful use of the bomb-sight compass by the bomb aimer, Sgt. J. W. T. M. Smith, until the aircraft finally arrived at base. Gilmore was awarded the D.F.C. and Smith the D.F.M.

When about seventy miles from the target, P/O W. S. Sherk's port engine failed but he pressed on and successfully completed his mission. This was but a further example of Sherk's fine fighting spirit, determination and courage which had for months been an inspiration to his squadron. In recognition of continued good work he was awarded the D.F.C.

On February 14th, coincident with the second of the month's attacks on Cologne, a simultaneous sortie made up of a strong force of bombers was sent out against Milan. R.C.A.F. squadrons did not participate in the raid but they had had a part-in an earlier attack on Turin on the 4th. The Turin attack was made under conditions of good visibility and 8,000 lb. and 4,000 lb. bombs and tens of thousands of

incendiaries were dropped. The defences were more numerous than on the occasion of the previous raid, the night of December 11th, but they were handled with little skill and in the opinion of our crews were not up to the German standard. The attack developed quickly and may best be described in the words of one of the Halifax pilots: "It was just like somebody swishing a white paint brush up and down the town and criss-crossing the area with parallel lines. The white lines of fire slowly turned to red as the flames took hold, and among them there were the flashes of high-explosive bombs".

On the night of the 4th, also, a very large force attacked the U-boat base at Lorient, where unexpectedly strong defences were in operation with a complete ring of searchlights round the town co-ordinating with flak. Under German occupation the two separate ports of Lorient and Keroman have been so extended as to become one great U-boat base. Two new submarine shelters, heavily protected by reinforced concrete, have been built, many new harbour buildings erected and new slipways laid down. All of which shows the importance which the enemy attaches to this base. However, despite the defences the docks were left a mass of flames.

Lorient was again visited on the 7th, 13th and 16th and each night R.C.A.F. squadrons had a large part in the raid. With the increased operations against the U-boat base night fighters were brought into more use, but had little success. The spirit shown by our bomber crews is exemplified by a happening on the raid of the 13th when F/L F. H. Bowden made six runs over the target while P/O R. G. Gutten, bomb aimer, strove to release his bombs despite the fact that the bomb doors had jammed. Eventually the jaws of the release slip were forced apart with an axe, after a struggle which lasted an hour and twenty minutes. For this outstanding effort Bowden was awarded a bar to his D.F.C.

On the 11th, 18th, and 19th, the R.A.F. attacked Wil-

helmshaven, another important U-boat base. As the R.C.A.F. squadrons were busy with mining operations they did not take part in the first raid. However, they contributed a small number of aircraft for the second and a very large number on the night of the 19th. The attack on the 19th was concentrated into less than thirty minutes and the pilot of a Halifax reported that "there seemed to be bombers wherever you looked, with fighters here and there weaving among them". On this raid one R.C.A.F. Wellington had a successful encounter with a Me. 110, which it shot down over the sea, while another of the bombers was attacked by a FW. 190 and escaped only after prolonged and violent evasive action. On this raid FS R. E. Taylor, at the helm of one of the Canadian bombers, put up a remarkable performance. The constant speed unit of one propeller became u/s early on the outward journey, but despite this Taylor flew on to the target and dropped his bombs. No sooner had he dropped his bombs than his aircraft was hit by anti-aircraft fire, trouble developed in the port engine and the kite went out of control. On regaining control Taylor was attacked by an enemy fighter which he evaded and at the same time gave his rear gunner a chance to deliver a damaging burst. Although later his port engine ceased to function altogether, Taylor brought his aircraft back to base and was awarded the D.F.M.

Other targets attacked during the month were Hamburg on the 3rd; Spezia, the principal Italian naval base in the Gulf of Genoa, on the 4th; Bremen, a large U-boat building centre, on the 21st; Nuremberg on the 25th, and St. Nazaire, another U-boat base, on the 28th.

Weather was particularly bad for the raid on Hamburg and a large number of the aircraft were unable to climb above the front, which brought severe electrical storms and heavy icing conditions. S/L C. S. Dowie, who captained one of our aircraft on this raid, pressed home a vigorous attack in the face of heavy ground defences, but immedi-

ately after releasing his bombs his aircraft was hit by flak which damaged the hydraulic system to such an extent that the undercart was lowered, causing the bomb doors to open and the flaps to sag. Dowie immediately set a direct course for home and although the damaged aircraft was subjected to almost continuous flak until it passed over the enemy's coast and weather conditions were very bad, a safe landing was made at an English airfield. There is no doubt that it was only Dowie's airmanship which enabled him to bring the aircraft and its crew home. For this feat he was awarded a bar to his D.F.C.

The R.C.A.F. squadrons, who were busy on mining operations on the nights of the raids on Bremen and Nuremberg, had a large part in the St. Nazaire raid on the night of the 28th. On this operation thick cloud screened the bombers on the route out, but over the target area visibility was excellent, so that crews were able to pinpoint their position and locate their targets with such ease and accuracy that the defences were literally swamped by the sheer weight of bombs. In slightly over half an hour more than 1,000 tons of high explosives and incendiaries were rained down and, without exception, the crews' reports made special mention of the immense fires which were caused.

Some of the mining operations produced incidents worthy of note. On the night of the 9th, S/L L. K. Smith reported that the weather had been quite good until fifteen minutes before arriving at the designated spot, when 10/10ths violent cumulo-nimbus cloud appeared and for thirty minutes the aircraft was continually in this static-packed cloud. At one time an extremely brilliant flash and loud report occurred, and a rip appeared in the fuselage fabric. Despite all this, the navigation was reported as excellent. Enemy fighters were active on the night of the 18th, when our aircraft were dropping mines in the Frisian Islands area. On his return, Sgt. T. V. Sylvester reported that his aircraft was intercepted by a Ju. 88, which came in dead astern and opened fire at 250

yards. The Ju. 88 broke away to port and disappeared when Sylvester's rear gunner opened fire and claimed strikes. After the mines were laid, Sylvester's aircraft encountered another Jerry, with a red light on its nose, coming in from dead astern at 1,400 feet. Apparently the Jerry did not see our bomber, for no attack was made, but shortly thereafter another Ju. 88 came in from astern and after our aircraft had made a turn through 360° one of the gunners opened fire at 200 yards, his tracer bullets being seen to enter the fuselage of the Hun, which then broke away. However, this attack could have done little damage, for the Ju. Attacked again and this time, after he had got in the Canadian rear gunner's sights at 150 yards, the enemy machine caught fire and dived into the sea. This success was confirmed by the crew of another aircraft. On the same night FS W. T. Gaunt, rear gunner with FS R. G. Goddard, was credited with probable damage to a Me. 110 when Gaunt responded to the Jerry's cannon fire with a long burst of machine-gun. Tracers were seen entering the enemy aircraft, which went into a dive. On the 27th, during another mining operation in the Frisian Islands area, Sgt. J. McIntosh's aircraft was attacked and badly damaged by cannon fire and flak. The rear gunner and flight engineer were killed, while the navigator, Sgt. A. A. Mellin, was badly wounded. While the other members of the crew put out the flames in the bomb bay, Mellin despite his serious injuries assumed the duties of flight engineer, afterwards resuming his normal duties and greatly assisting the pilot to fly the aircraft back to a United Kingdom base. Though suffering great loss of blood and intense pain, Mellin would not leave his post and for his exemplary conduct and great fortitude was awarded the D.F.M. A second aircraft, under the captaincy of Sgt. M. F. Gray, developed engine trouble when hit by flak and the crew were forced to ditch in the North Sea. They were located by an air-sea rescue aircraft and after twenty-two hours in a dinghy were all brought back safely to base.

March Comes in Like a Lion

The most recently formed R.C.A.F. squadron had finally reached the end of its teething troubles and became operational the first of the month, its first task being a mining assignment on March end. Also, the squadron which for four months had been operating under Coastal Command was once more back with Bomber Command.

Although during March there were only twelve nights when bombing conditions were good, Bomber Command dropped more than 8,000 tons of bombs on German targets in eleven raids: Berlin (3), Essen (2), Hamburg, Nuremberg, Munich, Stuttgart, Duisburg and Bochum. In addition, St. Nazaire was bombed twice. Sea-mining was also carried out on most nights during the month and reports of the sinking of ten vessels after striking mines laid from the air were received.

The month's offensive opened on the night of the 1st with a heavy attack on Berlin, in which only our latest four-engined aircraft—Lancasters, Halifaxes and Stirlings—were used. Two R.C.A.F. squadrons participated. The attackers were favoured by a cloudless sky and excellent visibility, enabling the crews to identify their exact position by reference to such landmarks as the River Spree and Berlin's famous lakes. The early arrivals did their work so well that crews scheduled to arrive later were guided to their targets for 20 minutes before they reached Berlin by the brilliant glare of the huge fires, which could still be seen from over Hanover and Bremen on the way home. Columns of smoke rose so thickly that large areas of the city were blotted out. Berlin radio described the raid as a "concentric attack", so that it would appear that our bombers approached the city from different directions, making it difficult for the defenders to know from which direction to expect the main onslaught. After at first belittling the attack, enemy propaganda noticeably changed its tone, describing it as a "terror raid on a large scale" and admitting material damage.

All the crews were elated at the undoubted success of their night's work. They reported that the timing was perfect, enabling them so to concentrate their attack as to give the defences little chance to aim at individual aircraft and preventing the fire services from functioning while the attack continued.

The most powerful defences were encountered on the outskirts of the city. There the bombers were met by heavy gunfire and cones of searchlight, but having penetrated this ring, the crews found the flak by no means as intense as had been expected. On the route, especially on the way back, night fighters were up in great numbers and there were several encounters.

On the night of the 27th Berlin was again the objective of a powerful force which included aircraft from several R.C.A.F. squadrons. For most of the long journey to and from the German capital the aircraft flew through almost continuous cloud which, though demanding accurate navigation, hampered the efforts of enemy night fighters, and few interceptions were made.

The main attack was over within half an hour and by that time so many large fires had been started that their glow, reflected in the sky, could still be seen when our crews reached the German coast on their way home. Two large explosions occurred during the course of the attack. Giving the city little respite, a third assault was delivered two nights later. At the same time a diversionary attack was made by an almost equally powerful force on Bochum. Each of these raids was on a scale which, a year ago, would have been regarded as extremely heavy. R.C.A.F. squadrons participated in both attacks.

To reach Berlin on this occasion our crews had to fly through some of the worst weather they had experienced for weeks. Iceladen clouds were banked up over the North Sea to such a height that the aircraft had to climb almost all the way to get over them. As the raiders crossed the enemy

coast they flew out of the worst of the cloud, and on approaching Berlin, although there was slight ground haze, visibility was sufficient to pick out the River Spree where it curves through the centre of the city.

The defences had been strengthened since the raid two nights before. The anti-aircraft batteries were reinforced by a great number of searchlights, and night fighters were much more active. Several of our bombers had encounters with enemy fighters, one Ju. 88 being shot down over the city. Despite these defensive efforts the attack was considered successful.

Conditions over Bochum and the Ruhr were exceptionally favourable, the industrial haze, which usually bothers our crews operating over Happy Valley, being much less in evidence than usual. Flak was moderate, but night fighters were up. One aircraft, captained by Sgt. E. Williams, was approached on the port side by a Ju. 88 which was carrying a red light in its nose. Sgt. J. D. Duval, the air gunner, gave it three bursts and hits were observed. The light in the Ju. 88 went out and when the Jerry dived straight down it was claimed as damaged. Another of our aircraft, *G for George*, captained by Sgt. A. H. Smith, was making its bombing run when the rear gunner, Sgt. M. L. Buxton, spotted a Ju. 88 approaching from 300 yards astern and 500 feet below. He fired three long bursts before the enemy aircraft had time to open fire and hits were observed in the port engine, following which the machine was seen to disintegrate in the air and fall in flames. This was confirmed by all members of the crew and the Junkers was claimed as destroyed.

Hamburg was the target on the night of March 3rd for a force which included aircraft contributed by R.C.A.F. squadrons. Intense flak was encountered and many enemy aircraft were operating. P/O R. J. Wagner, the mid-upper gunner of an R.C.A.F. aircraft captained by P/O J. D. Dickson, claimed as destroyed a Me. 110 which was shot down in flames and seen to crash. A second enemy night fighter,

a Ju. 88, fell to the guns of Wagner and Sgt. J. A. Weeks, the rear gunner.

Two nights later Essen was attacked in a concentrated raid which lasted for forty minutes. One hundred and fifty 4,000-lb. bombs were included in the load of high explosives and incendiaries dropped. A number of R.C.A.F. squadrons participated in this raid. Half way through the attack there was a violent explosion which left a huge orange cloud hanging in the sky for some minutes. One pilot said that a sheet of flame shot up to a height of 1,000 feet and lit up the cockpit of his aircraft. Another pilot said that yellow and orange flame darted upwards and then turned red as it cascaded down over the town. Big fires sprang up and dense clouds of smoke rose as high as 15,000 feet by the time the raid was over. Four hundred and fifty acres were devastated and 53 buildings in the Krupp works were hit. When nearing the target area the aircraft captained by P/O G. P. Vandekerckhove was badly damaged by anti-aircraft fire, but, despite this, the primary target was attacked. The bomber, although attacked by a Ju. 88 which the rear gunner, Sgt. J. J. McLean, damaged, was flown safely back to England, but before reaching base the starboard motor caught fire and cut and the propeller fell off. Great credit is due to Vandekerckhove for the way in which he handled the aircraft and landed safely. It was this effort, among others, that was cited when he was awarded the D.F.C. in August 1943

Essen was attacked a second time in the course of the month, on the night of the 12th. All of the R.C.A.F. squadrons participated in this raid, when further severe damage was done to the great Krupp armament works. Two of the largest workshops, which had escaped damage on the previous raid, were destroyed, and large fires were still burning in the centre of the works the next afternoon when a reconnaissance aeroplane took photographs. Although Bomber Command had been trying for months to strike a

crippling blow at this vital and most strongly-defended target, it was not until the two heavy raids in March that this was really accomplished. The attacking force on each occasion carried a weight of bombs equivalent to 250,000 large-calibre artillery shells.

Essen's defences had been greatly increased since the raid on March 5th and many of our aircraft had engagements with the enemy. One, captained by W/C D. H. Burnside, was hit by flak before reaching the target and the navigator was killed, while Keene, the wireless operator, had one of his feet shot off and both his legs were lacerated. The aileron control of the aircraft was affected and the windscreen de-icing glycol tank burst, drenching the bomb aimer, P/O R. J. Hayhurst, and filling the forward part of the kite with suffocating fumes. Despite this damage Hayhurst directed the pilot to his target, which was successfully bombed, and a good photograph obtained. The aircraft was held by searchlights for a few minutes while over the target, but Burnside skilfully evaded the defences and set course for home. All this time Keene, disregarding his wounds, laboured for over two hours to repair the damaged wireless equipment. He also offered assistance in navigating the aircraft and managed on two occasions to drag himself to the navigator's compartment for essential information. In the meantime, the aircraft on its return trip encountered fighters which P/O D. B. Ross, the air gunner, managed to beat off, while also issuing directions for evasive tactics. Displaying fine airmanship, Burnside flew his damaged aircraft safely back to base. As was only fitting, the very fine display of courage and determination shown by all members of the crew was recognized by awards. W/C Burnside received a bar to his D.F.C., Hayhurst and Ross the D.F.C., and Keene, who already had the D.F.M., the Conspicuous Gallantry Medal.

The aircraft flown by FS R. Hamby was badly shot up in this raid. The navigator was killed when they were

caught in a cone of searchlights and shot at by flak. Despite this the target was successfully bombed, and the pilot "put up a fine show", flying his aircraft back with the hydraulics, the navigational aids and the wireless wrecked.

Still another aircraft, flown by P/O N. D. Daggett, returned with 200 flak holes, seven of them in the petrol tanks. The hydraulics, instruments and port outer engine were unserviceable and the rudder control column was almost severed.

On the night of the 8th the important industrial centre of Nuremberg was attacked, both the M.A.N. diesel engine plant and the Siemens electrical works being hit. The M.A.N. factory at Nuremberg is a branch of the organization whose main works at Augsburg had previously been attacked, and is engaged in turning out a variety of diesel engines for armoured fighting vehicles and lorries. Siemens are leading producers of electrical equipment. The Germans are known to be short of transformers, and the Siemens' Nuremberg factory is believed to have been making these in large quantities.

A great deal of railway damage was also done. Nuremberg, a traffic centre of first class importance, is the junction of six main lines which radiate to all parts of Germany, Czechoslovakia and Austria. Reconnaissance photographs showed that the main repair shop in the railway marshalling yard had been badly hit, the roof of another repair shop damaged, and many smaller buildings either destroyed or hit. Four sheds near the main railway station were destroyed and the railway administration building devastated.

The offensive continued unabated when Munich was attacked on the night, of the 9th. Two R.C.A.F. squadrons contributed to this attack. Munich, the fourth largest city in Germany, has a number of war industries including the Bayerische motor works, which make aero engines, tanks, armoured cars and motor tires. It is also an important junction of railway lines between Germany and Italy and links

western Germany with Berlin, Prague and Vienna. It possesses extensive marshalling yards and repair depots for locomotives and railway wagons.

Though the weight of bombs dropped was smaller than in most of the recent major raids, this attack was considered very successful. When it had been in progress about a quarter of an hour, a great jet of flame with a huge explosion rose to over 1,000 feet. "It mushroomed out", a Halifax pilot said, "and lit up all the ground like a glowing sunset. It made as much difference as someone switching on a light in a room."

More fighters than ever seemed to be based in southern Germany for the defence of vital industrial areas now coming under heavy attack from our bombers. There were many sightings and encounters in the attack on Munich, in which a Ju. 88 and a Me. 109 were shot down.

Two nights later the industrial centre of Stuttgart was the target. The main industry of Stuttgart is precision engineering. The Bosch plant, which is situated there, is well known for magnetos, spark plugs, fuel injection pumps and all kinds of accessories for internal combustion engines. In addition, there are important transport targets. In the southern part of the city so many fires were started that eventually they formed one huge blaze. Flak was not heavy by German standards, but it was fiercer at the end of the attack than at the beginning, a reversal of the usual experience. A number of bombers had encounters with enemy night fighters and R.C.A.F. aircraft had their fair share of the excitement.

One aircraft, captained by FS M. Marment, was attacked by a Me. 110 on the return trip, causing the port inner and the starboard outer engines to cut. All excess equipment was jettisoned over the Channel. Just before landing the port outer engine began to surge, but a successful wheels-up landing was made, none of the crew being injured. Great skill was undoubtedly responsible for the safe return of the aircraft and Marment was awarded the

D.F.M., while his navigator, P/O J. R. Price, received the D.F.C.

S/L D. W. S. Clark and his crew were engaged by an enemy aircraft on the outward journey. The assailant was seen to go down in flames and to explode on hitting the ground.

Another of our planes, captained by Sgt. H. A. Symes, was in contact for thirty minutes on the outward journey with a Me. 110, which approached six or seven times from astern and below, though no fire was exchanged due to the violent evasive action taken by Symes. On the final approach, however, the rear gunner of our aircraft, Sgt. R. T. Botkin, instructed the pilot to turn to starboard, enabling him to get in a point-blank burst at 200 yards. The Me. was claimed as damaged, though return fire was experienced and our aircraft came back with ten bullet holes in the port wing, the petrol tank and aileron.

One more combat of note took place on this night. Daggett, captain of an aircraft, sighted a Me. 109 which approached from the port quarter to 100 yards and fired a short burst which missed. The rear gunner, FS L. I. Thomas, an American, simultaneously opened fire on the enemy machine, which did a violent bank to port and spiralled down, trailing smoke. It then burst into flames and exploded before diving through cloud.

Among others, P/O B. C. Dennison and crew were reported missing from the raid on Stuttgart. The pilot with FS H. J. Jennings, the wireless operator air gunner, and S/L L. E. Logan, the second pilot, effected a miraculous escape from enemy territory, and the two latter returned in due course to the squadron. All three were awarded the D.F.C., Jennings having in the meantime been granted a commission.

And Goes Out the Same Way

Between March 12th, when Essen was attacked, and

March 26th, when an attack on Duisburg took place, Germany was given a breathing spell, thanks to bad weather. In the Duisburg raid all R.C.A.F. squadrons took part. Three violent explosions in quick succession were reported by crews, as well as an exceptionally big fire which turned the clouds above into a vivid red.

During this attack the aircraft in which Sgt. Thomas was flying as rear gunner was intercepted by an enemy fighter which attempted to attack from close range. Coolly and skilfully Thomas delivered telling bursts, causing the attacker to break away with its engine on fire. On several other occasions when his aircraft had been attacked by enemy fighters, his accurate shooting had driven them off. For his excellent record Thomas was awarded the D.F.M.

Two attacks were made on St. Nazaire, on the nights of the 22nd and 28th. Several R.C.A.F. squadrons contributed aircraft in the first of these, while all Canadian units were represented on the second. St. Nazaire is the second most important of the enemy's Bay of Biscay bases. It is considerably smaller than Lorient but plays an important part in the Battle of the Atlantic.

The first night on which St. Nazaire was attacked there was widespread fog over the Channel, which threatened to come down and blot out some of our aerodromes. For most of the way to the target the visibility was poor, but over St. Nazaire the sky and ground were clear of haze and the docks stood out clearly. Numerous fires were started among the already badly damaged harbour and dock installations. But weather conditions were still difficult when the crews returned. One bomber made a forced landing, injuring one member of the crew, but the others were shepherded safely home or to aerodromes other than their own. In the circumstances the toll of only one aircraft was surprisingly small.

On the night of the 28th, however, the visibility over St. Nazaire was so good that the whole of the town and docks

stood out clearly. Soon after the first flares had gone down a steady stream of bombers flew over the target at a fast pace, permitting exceptionally concentrated bombing. Some of the fires merged into conflagrations over great areas and one violent explosion occurred at the south end of the docks. The pilot of a reconnaissance aircraft which flew over St. Nazaire the next morning reported that columns of smoke were coming up from the U-boat base to a height of 15,000 feet.

In this attack one R.C.A.F. aircraft, piloted by Sgt. G. H. Wood, was attacked by a Ju. 88 over the target area. Fire was exchanged and the enemy fell away in a steep spiral dive and was last seen at 2,000 feet, apparently out of control. The aircraft was claimed as probably destroyed. Wood's machine sustained no damage.

Another aircraft, captained by Sgt. P. S. Harrison, while caught in searchlights over the target was turned over by a burst of flak. The pilot gave the order to abandon and the bomb aimer baled out. The rear gunner was just on the point of leaving when the captain regained control and countermanded the order.

In addition to these bombing operations, R.C.A.F. squadrons carried out mining sorties on many nights, during which a number of mines were laid.

On the night of March 2nd, an aircraft captained by Sgt. J. H. Black was not heard from after taking off on a mine-laying sortie to the Frisian Islands area. Three days later Sgt. P. G. Rothera, the bomb aimer, was picked up in a dinghy at sea, together with the body of the captain, who had died of exposure a few hours previously. Rothera's report indicated that the air gunner was apparently killed in action and that the navigator and the wireless operator were still in the aircraft when it plunged into the sea.

On the 6th, while on night mining operations in the same area, Sgt. J. Morton and crew were attacked from below by a Ju. 88. Two cannon shells burst beneath the pilot's

seat, destroying the hydraulics and causing two small fires in the cockpit and behind the main spar, which fortunately were promptly got under control. In the meantime the rear gunner, Sgt. T. Bell, got in a burst at about 70 yards range and observed hits on the underside of the enemy aircraft.

While mining on the following night, Smith and crew were attacked by two Ju. 88s. Buxton, the rear gunner, first saw an enemy aircraft at 600 yards on the starboard quarter, when its pilot switched on his lights and, opened fire immediately. Buxton held his fire to 400 yards, firing two bursts, but the glare prohibited results being observed. Meanwhile the wireless operator in the astro-dome reported another enemy with similar lights attacking from the port beam and ordered evasive action. The Jerry did not open fire and disappeared beneath our aircraft before the rear gunner could bring his guns to bear.

April Brings Showers—of Bombs

R.C.A.F. squadrons continued their share of the bombing offensive during the month of April, while another squadron was formed but did not start operations until May. One of these squadrons, the first R.C.A.F. bomber unit to be formed overseas, was honoured by being chosen to join the Pathfinder Force, with W/C J. E. Fauquier, D.F.C., as its commanding officer. Also during this month certain R.C.A.F. squadrons received word that they had been selected to go to N.W. Africa.

During April more than 10,000 tons of high-explosives and incendiaries were dropped on Germany by Bomber Command, and 1,000 tons were dropped on the Italian naval base of Spezia in two raids. R.C.A.F. bombers did not take part in the raids against Spezia.

On the night of April 2nd, the two U-boat bases of Lorient and St. Nazaire were attacked by a force in which several R.C.A.F. squadrons had a part. Only small fires were seen at Lorient, which has been so badly battered that

little can remain above the surface to catch fire. At St. Nazaire however, a ground haze could not prevent the crews from seeing large fires and noting one severe explosion. The submarine pens received direct hits and two U-boat stores and a small floating dock were also damaged.

The next night several hundred bombers made another effective attack under favourable conditions on Essen. It is worthy of note that the enemy departed from his usual reticence to the extent of admitting that "big damage" was caused. Photographs taken during the raid confirmed the reports of the crews that further hits had been scored on the Krupp works. While the attack was being made there was one tremendous explosion, and another occurred as the crews on their way home were nearing the Dutch coast, from which point the blast and the great number of fires could be clearly seen. Photographs taken by reconnaissance aircraft two days after the raid are possibly the clearest that have ever been taken of Krupps. Usually details are obscured by the thick haze from the hundreds of chimney stacks in the works, but in these photographs by far the greater number of factory chimneys showed no trace of smoke coming from them. The works in fact appeared to be almost entirely inactive.

Essen is notorious for the strength of its defences, which had been still further increased since our last attack on March 12th. Describing the strengthened defences, the bomb aimer of a Halifax said that he had never seen so many searchlights "which were working in cones of about thirty each". One of the R.C.A.F. bombers, captained by Sgt. P. S. Johnson, was attacked by a Me. 110 which raked the fuselage of the Halifax, wounding two of the crew and rendering unserviceable the rear turret and elevator and flaps control. The bombs were jettisoned and evasive action was successfully taken, the aircraft eventually landing safely in England.

Essen was subjected to yet another attack on the last

day of April, in wintry weather, which brought the total weight of bombs dropped on that industrial centre to more than 10,000 tons. This was the heaviest weight dropped so far on any single town in the world. All along the route there were thick ice-laden clouds, which often reached a height of 20,000 feet, while the temperature was as low as 28 degrees below zero. The ice was so severe that many aircraft had their trailing aerals snapped off. The attack lasted forty minutes and if the thick clouds hampered the crews, they also rendered the enemy's powerful force of searchlights largely ineffective. The red glow of many fires was seen and midway through the attack there were two explosions which were so violent that they were noted by crews still twenty minutes flying time from the target area. Early in May it was announced that the March-April attacks on the Krupp works caused damage without precedent in air assaults on industrial targets. More than three-fifths of the 300-odd buildings in the 270 acres of built-up area were damaged. One item of damage alone is believed to have amounted to two months' production of military trucks, while the destruction of locomotives is estimated at the equivalent of three months' output.

All the R.C.A.F. squadrons took part in the raid on Kiel on the night of April 4th. Thick cloud extended over the whole of the port, making observation of bombing results difficult, but crews who dived through cloud to identify their targets saw many great fires. Even from above the cloud bank the reflection of the flames could be seen, while there were two tremendous. explosions which nothing could hide.

Though the ground defences were active, the clouds were so, thick that the searchlights could not penetrate. Higher up the sky was clear and the enemy sent up a large number of night fighters, several of which were damaged, and some probably destroyed. After bombing the target an R.C.A.F. bomber, captained by Sgt. M. Chepil, was at-

tacked by a single-engined enemy aircraft believed to be a Me. 109, which came in on the port quarter from above and opened fire from approximately 300-400 yards. Our aircraft made a deep diving turn to port and the rear gunner, P/O E. J. Andrews, opened fire. The enemy aircraft burst into flames and fell into the clouds and our crew claimed it as destroyed.

Another R.C.A.F. bomber in the attack on Kiel, captained by F/O D. L. Kennedy, was damaged by heavy flak about five minutes before the target was reached. The rear gunner was trapped and it was only after strenuous effort by P/O D. Laskey, the bomb aimer, that he was able to move the turret and free the gunner. The pilot decided to jettison his bomb load and return to base. On the way back it was noticed that a light was burning under the fuselage, caused presumably by a short circuit and which the crew could not put out. Shortly afterwards the aircraft was attacked by a Ju. 88, which damaged the hydraulics so that the undercarriage went down and the bomb doors fell open. The navigator was unable to obtain a fix, but it was calculated that the aircraft would have sufficient gasoline to reach England and make a crash landing. Five minutes' flying time from the coast the engines cut out. On ditching in the sea the aircraft went under, striking with such force that it broke up immediately. Laskey and Sgt. L. L. Anderson, the wireless operator air gunner, were able to swim to the overturned dinghy and each helped the other to climb into it. Four and one-half hours later they were picked up by a destroyer. Kennedy's body was washed ashore, but the bodies of the navigator and rear gunner were not recovered. Laskey and Anderson were awarded the D.F.C. and D.F.M. respectively.

On the night of the 8th, a very powerful force, fighting their way through thick cloud and ice, delivered a heavy attack on the Ruhr. Conditions could scarcely have been worse. Ice-laden clouds extended to a height of 20,000 feet

for almost the whole distance between the bombers' bases and the Ruhr. Some of the aircraft became so heavy with ice that the pilots had great difficulty in controlling them. Flak along the whole of the Ruhr valley was as vicious as ever and night fighters wandered in and out of clouds trying to intercept the raiders. One pilot dived 12,000 feet before he got below the base of the clouds, and while making his bombing run from that low height, he saw numerous fires among the bursting 4,000-lb. bombs, a great number of which were dropped.

The R.C.A.F. aircraft piloted by P/O C. C. Stovel reached the target in 10/10ths cloud with one engine un-serviceable. The aircraft was caught in a box of heavy flak, and due to icing went into a spin after violent evasive action, with the remaining three engines cutting. The captain warned the crew to stand by to bale out and, apparently misunderstanding instructions, four members baled out. The pilot regained control of the aircraft at 1,000 feet, three of the engines starting up again. On the return journey the engines cut again and the aircraft went into another spin, which was corrected at 6,000 feet. The remaining members of the crew finally reached base safely, after a very shaky trip. The coolness and great skill displayed by Stovel won for him the D.F.C.

Another aircraft, piloted by Sgt. L. F. Williamson, was hit by anti-aircraft fire over the target, and the bomber commenced to vibrate violently while the rudder bar swung loosely. Despite this, the captain continued the run-up and successfully bombed the target. The situation was critical, however, and the crew was ordered to prepare to abandon the aircraft. There was no reply from the rear gunner, and the navigator, upon investigation, found that the rear turret had been blown away. With the rudder badly damaged, the rear fuselage stripped of fabric, the hydraulics out of action, the undercarriage sagging and the bomb doors open, the captain headed for home, where he effected a successful

landing. For his display of fortitude and courage in most hazardous circumstances Williamson was awarded the Conspicuous Gallantry Medal.

An attack on Duisburg was made on the night of the 26th, when for forty-five minutes bombs crashed down at the rate of more than 30 tons a minute. Altogether the weight of bombs was almost as great as that dropped on Cologne in the 1,000-bomber raid.

Duisburg, one of the most important targets in the RhineRuhr area, has miles of docks and railway sidings, extensive heavy industries and chemical factories, and lies at the junction of the Rhine and Ruhr rivers. The Rhine-Herne canal connects Duisburg with Dortmund, from which point the Ems canal links it with the North Sea port of Emden.

Some indication of the technical advances made by Bomber Command in recent months is provided by the fact that so large a force was able to achieve such concerted bombing under the conditions prevailing. On the outward journey the crews were driven along by a 60-mile-an-hour gale, with occasional squalls reaching a velocity of 100 miles an hour, which did not subside when the time came to return.

Over Duisburg the sky was clear and bombing conditions were reasonably good. So many incendiaries were showered down at one time that for some minutes whole areas seemed to be carpeted in white. As fires started, the white slowly changed to an angry red glow with fires springing up all over the target area.

As soon as the first flares had been dropped hundreds of searchlights were switched on and a very heavy barrage put up. The earliest arrivals reported that the defences were among the strongest they had encountered for some time, but such devastating bombing soon began to affect the gunners and searchlight crews and before the raid ended the defences had wilted badly. Searchlights inside and outside

the town, operating in teams of anything from 10 to 50, caught, some of the earliest bombers in their cones, illuminating them, while hundreds of anti-aircraft guns opened fire.

No ground defences, however strong, could effectively stem the tide of such a devastating attack, and bombers which came later had no need to search for their targets; the glaring fires, from some of which smoke spurted to a height of 10,000 feet, served as sign posts. Towards the end of the raid there was one vivid explosion from which enormous flames, followed by a great column of smoke, shot up.

In this raid W/C L. Crooks, the commanding officer of one of the R.C.A.F. squadrons, was attacked by an enemy night fighter and his aircraft very severely damaged. He skilfully evaded the attacker but was forced to turn back, being fully aware that if he succeeded in reaching base he would be faced with the difficult problem of landing his aircraft with no undercarriage and with several tons of high explosives, in the bomb bays, which could not be jettisoned and which were certain to explode on impact. His navigator, F/O D. W. Simpson, greatly assisted by the wireless operator air gunner, F/L F. P. Marsh, displayed exceptional navigational skill in the most difficult circumstances, and both showed great coolness in the perilous situation in which they found themselves. Thanks to their invaluable assistance, Crooks brought his crippled aircraft back to base, where he ordered four members of his crew to bale out. He then set course for a practice bombing range, with Marsh still with him, and on reaching it they both took to their parachutes. Marsh and Simpson both received the Distinguished Flying Cross for their part in bringing the aircraft back to England, while Crooks was awarded the Distinguished Service Order.

The weather continued bad on the night of April 10th, when objectives in south-west Germany were attacked. A belt of thick cloud seemed to be almost solid, and caused

great difficulties for navigators and bomb aimers. An unusually large number of night fighters was encountered above the clouds, and flak over the target area was intense. In spite of this, many 4,000-lb. bombs were dropped and incendiaries caused fires.

One R.C.A.F. Wellington, captained by FS F. J. Higgins, was heavily damaged by anti-aircraft fire shortly after bombing the target. In very difficult circumstances, Higgins flew the aircraft to an airfield in the United Kingdom and effected a successful crash-landing. He was awarded the D.F.M. for his display of courage and determination.

The weather proved much kinder to our crews on the night of the 14th, when a powerful force was sent out to attack Stuttgart. This town, one of the main railway junctions on the route to Italy, was of particular importance at this time when Italian war traffic was heavy. It also contains a number of vital industrial targets and factories engaged in producing power plants for U-boats. So many aircraft were over Stuttgart at the same time that they almost jostled one another as they went in for their bombing runs. Great loads of incendiaries had soon done their work and before the end of the raid vivid fires shot up columns of smoke which billowed to a height of several thousand feet.

Morton, at the helm of one of our bombers, encountered two Me. 110s, both of which were claimed as destroyed, while our aircraft was only slightly damaged by the enemy fire.

More than 600 bombers, including representatives from many R.C.A.F. squadrons, attacked the Skoda works at Pilsen in Czechoslovakia, and the armaments centre of Mannheim-Ludwigshafen, on the night of the 16th. The loss of 55 aircraft, ten of which were R.C.A.F. bombers, was the heaviest the R.A.F. had suffered in one raid—three more than were lost during the 1,000-bomber raid on Bremen the year before—but in view of the very deep penetration of enemy territory involved, and the favourable conditions for

interception by enemy night fighters, it was not such as to cause misgivings.

The raid on the Skoda armament works involved a round trip of about 1,800 miles, roughly 1,200 of which were over strongly defended enemy territory. The damage caused by the R.A.F. to the Krupp works at Essen made the Skoda works of even more vital importance to the enemy's war production. To make sure of causing serious damage to such a distant target, Bomber Command had to wait for favourable weather and consequently to accept losses above the average. The Skoda works were known to be concentrating on the production of guns and tanks and it was felt that such a vital link in the enemy's production chain justified the risks of a long journey in moonlight.

Reports indicated that the attack was successful. Flares and the moon combined to give the crews a clear view of their targets, which cover an area of 320 acres and employ 30,000 to 40,000 people. Within a few minutes after the arrival of our bombers, the whole plant seemed to be enveloped in smoke, with vivid flashes from the bursting of bombs and explosions among buildings. The weather was so clear that many aircraft could be seen over the target at the same time, and as one pilot described it, "Bombs were going down at a fantastic rate".

Some of the crews returning from Pilsen could see the red glow of fires started by the smaller force at Mannheim-Ludwigshafen. These towns face one another. The former is an important Rhineland centre for munitions traffic, while Ludwigshafen is mainly concerned with the production of chemicals.

This attack started earlier than that on the Skoda works and was concentrated into about twenty minutes. So many fires were started that the river appeared to be red. There were two very large explosions towards the end of the raid, one of which sent a column of smoke up to a height of more than 6,000 feet.

There was a three-pronged attack on Germany on the night of April 20th. The main force, consisting of Lancasters, Stirlings and Halifaxes, raided Stettin, the largest and most important port on the Baltic and the chief supply port for the German armies in North Russia; a smaller number of Stirlings went to Rostock, another Baltic port; and Mosquitos celebrated Hitler's birthday by bombing Berlin, as they had done twice in daylight on January 30th, during the Nazi anniversary celebrations.

Only two R.C.A.F. squadrons contributed aircraft for this night, when over one hundred and fifty 4,000-lb. bombs were dropped in about forty minutes, as well as tens of thousands of incendiaries and hundreds of other high-explosive bombs. Such fierce fires were started at the two Baltic ports that the fire services had been unable to quell them ten hours later when a reconnaissance aircraft flew over the targets and found the whole of the centre of the port obscured by smoke from fires. The attack was carried out in bright moonlight and seemed to catch the defences unprepared, for it was only as the raid developed that the flak became uncomfortable.

Mining Operations Are Speeded Up

In addition to these bombing operations, the number of mines laid in enemy waters during April constituted a record, being almost double the average number dropped in each of the three preceding months. R.C.A.F. squadrons undertook mining operations on seven nights during the month, the operations on the night of the 28th being on a much larger scale than anything previously undertaken. The number of aircraft sent out was comparable to the force employed in a major bombing raid, and in that one night Bomber Command laid as many mines as it had in a month a year before. The 26,000-ton German battleship *Gneisenau* struck a mine in the Baltic at the end of this month and had to be beached.

The D.F.M. was won by one member of a crew detailed to lay mines on the night of the 28th. As the area to be mined—a narrow strait, about 200 yards wide, off the Norwegian coast—had not been visited before, little gen could be given about flak and searchlights. All the aircraft encountered both, the flak being very accurate, and one kite, captained by FS S. Pennington, was hit in several places and the port propeller damaged. The rear gunner, Sgt. J. D. Watts, returned the fire from an anti-aircraft ship, and had the satisfaction of causing the ship to break off its attack. This incident, coupled with the fact that both in the air and on the ground Watts “has displayed outstanding keenness and efficiency and has rendered valuable assistance to the gunnery leader in the training of new crews”, won for him the Distinguished Flying Medal.

The purpose underlying the mining of enemy waters at this time was to help the Russians by impeding the Germans’ movement of material to the Eastern front in preparation for their spring offensive.

Under any conditions, mine-laying from the air is a hazardous job, for the mines have to be dropped from a low level, usually in narrow or shallow waters, and near enough to the coast to bring the aircraft within range of night fighters and even shore-based anti-aircraft batteries. The enemy maintains large numbers of flak ships off his North Sea and Baltic coasts; and the mining of the Baltic involves crossing Jutland or some other equally strongly guarded area.

The growth in the size of Bomber Command during the last twelve months leaves a larger margin of heavy bombers available for mine-laying, and the impeding of the enemy’s sea transport by this means is as much a part of Bomber Command’s offensive as bombing raids.

CHAPTER XII

THE SUMMER OFFENSIVE

NEW R.C.A.F. squadron, with W/C H. W. Kerby as commanding officer, established a record in that, though formed only on May 1st, it started operations on the 23rd, when it contributed aircraft for an attack on Dortmund. During the period between its formation and the date of its first offensive operation, intensive training was carried out and the ground crew worked especially hard to get everything in shape in the shortest time possible. Some of the pilots flew as second pilots in aircraft of other R.C.A.F. squadrons to gain experience. As the squadron was outfitted with Wellington aircraft and equipment from a unit which that month converted to Halifaxes, it was possible to start operations within twenty-two days.

The May bombing offensive against Germany was opened by a heavy attack on the night of the 4th on Dortmund, the important industrial and transport centre in the Ruhr. Dortmund's importance as a bombing target had been increased by reason of the damage caused to Essen in recent attacks, as its war industries had been working at highest capacity to replace gaps left by wrecked factories at Essen.

Many R.C.A.F. squadrons participated in the attack, which due to fine weather got in very concentrated bombing. Many 8,000-lb. high-explosive bombs were used,

while 4,000-pounders were dropped at the rate of four every minute. Some of the fires were of exceptional size and two tremendous explosions occurred. The crews' reports presented a picture of tremendous havoc, with whole areas swallowed up in flames. Seven R.C.A.F. aircraft were reported missing, of Bomber Command's total loss of thirty. A thick screen of searchlights was encountered, but the crews regarded the flak as below the normal Ruhr standard and night fighters were few in number.

Dortmund was attacked for a second time on the 23rd, when the tremendous total of over 2,000 tons of bombs was dropped in exactly one hour. This was the first operation for the lastformed R.C.A.F. squadron, and the aircraft detailed from this squadron were led by the commanding officer, W/C Kerby, who celebrated the opening hours of his birthday over the target. The weather was almost perfect, visibility being so good that the river, roads and other landmarks stood out clearly. At the start of the attack there was lively opposition from ground defences, but by the time the last bombers had arrived the gunfire had almost died away and only a few searchlights remained to roam aimlessly about the sky. By this time so many buildings in Dortmund were ablaze that smoke rose in great columns, extending to 15,000 feet, and blotted out a large part of the city.

The ease with which the crews were able to identify their targets permitted a highly concentrated attack. Quite early there was one particularly big fire in the western part of the city and soon all the target areas were marked by flames and spirals of smoke. Detailed examination of photographs taken after the raid showed great destruction. In the closely packed centre of the city alone, at least 150 acres were totally devastated, mainly by fire.

Many night fighters were sent up in an effort to stem the tide of the attack and several bombers reached home after indecisive combats. One R.C.A.F. aircraft, piloted by

P/O M. E. Tomczak, while over the target area was hit by heavy flak, causing damage to the nose, tailplane and elevators. Two pressure and two temperature gauges were damaged; there was an oil leak in the inner starboard motor; the W/T aerial was shot away and the navigator was wounded. Later the aircraft was attacked by a twinengined enemy fighter which the rear gunner could not identify. First sighted dead astern at 250 yards, the enemy aircraft opened fire immediately and closed in to about 150 yards before breaking off his attack sharply to port. The rear gunner returned the fire while the pilot took evasive action and shook off the enemy. Another aircraft, captained by F/O P. G. Weedon, was damaged by flak and the petrol tanks were holed. The pilot was able to fly the aircraft home, but when over base the two engines cut and a crash resulted. Fortunately, the crew were uninjured.

Sgt. L. G. Collins, the navigator of another aircraft captained by Sgt. P. T. Digwall which was hit when near the target area, was wounded in the head, his skull being fractured. Though weakened by loss of blood, he refrained from informing the captain until the target was bombed and the aircraft was well clear of the area. Displaying outstanding fortitude he plotted the course for the homeward flight and did not desist until a safe landing was effected, when he collapsed and was removed to the hospital in a semiconscious state. For his courage and devotion to duty he was awarded the Distinguished Flying Medal.

The aircraft piloted by Sgt. S. Gaunt, an American in the R.C.A.F., was coned and badly shot up west of the city, the shell of the undercarriage being practically shot away. When the front turret caught fire and filled the cockpit with smoke the captain ordered the crew to bale out, which the rear gunner and the bomb aimer did. Due to the back draught from the escape hatch, however, the fire went out and the damaged aircraft was flown safely back to England, though it was shadowed at one time by a Me. 110 and

corkscrew evasive tactics had to be employed. For the courage, skill and coolness displayed, Gaunt was awarded the D.F.M.

The Conspicuous Gallantry Medal was awarded Sgt. S. N. Sloan, the bomb aimer of another R.C.A.F. aircraft, for his action on the same night. Seven minutes after bombing Dortmund the aircraft was coned by searchlights and badly damaged by antiaircraft fire. A steep dive failed to shake off the searchlights' beams and the bomber was subjected to further heavy fire while still illuminated, but Sloan, regaining control of the aircraft after the pilot had baled out and displaying superb skill and determination, eventually flew clear of defences and headed for home. Besides the flak damage, the hatch and the rear turret door were open and could not be closed, so that a wind of great force blew through the length of the aircraft. All the lights in the navigator's cabin were extinguished, but in the face of extreme difficulty Sgt. G. C. Parslow, the navigator, plotted a course. On the return flight both Parslow and F/O J. B. Bailey assisted their impromptu skipper in every way within their power and eventually Sloan reached an airfield in England and made a good landing. In appalling circumstances these members of the crew displayed courage, determination and fortitude of the highest order. Besides being awarded the C.G.M., Sloan was granted an immediate commission, while Bailey was awarded the D.F.C. and Parslow the D.F.M.

Other attacks during May in which our squadrons participated were against Duisburg on the 12th, Bochum on the 13th, Düsseldorf on the 25th, Essen on the 27th, and Wuppertal on the 29th. On the night of the 16th the famous breaching of the Ruhr dams took place, though none of the R.C.A.F. squadrons took part in this exploit.

In the raid on Essen the bombers attacked in ten waves, of about equal strength, and each wave carried the bomb load calculated to do the most damage at that particular

stage of the attack. Although the weather was overcast, gaps in the clouds revealed large fires which took a firm hold, and many crews reported violent explosions. Even Berlin admitted that major damage had been done. At intervals during the attack the barrage was more violent than anything seen there before. Though the searchlights could not co-operate with the guns because of the clouds, the shell bursts seemed to cover the sky over the town. Many of our aircraft returned with holes in the wings and fuselage. An R.C.A.F. Wellington flown by Sgt. W. Lachman had trouble with the starboard engine, which went u/s while still over the target area, after the primary target had been attacked. Course was set for home, but off the Dutch coast the pilot was forced to dive to 9,000 feet to avoid heavy accurate flak which damaged the rudder trimming tabs. Nearly two hours later, at 6,000 feet, the port engine developed trouble and as height could not be maintained the aircraft had to be ditched. A good sea landing was made and the crew were able to launch their dinghy without trouble. The rear gunner, however, was missing and on paddling to the stern of the aircraft it was found that the turret had been blown off. All the others were later rescued.

Bomber Command struck at a new target on the night of the 29th, when a very heavy attack was directed at the Barmen industrial centre of Wuppertal, during which well over 1,500 tons of bombs were dropped. Long before the attack had ended the whole of the target area was studded by fires and one tremendous explosion was reported. Recce. aircraft brought back information that more than 1,000 acres had been devastated.

Passing over the Ruhr area the raiders had to run the gauntlet of batteries of all types of anti-aircraft guns and cones of searchlights, while the enemy had taken full advantage of the clear weather and sent up large numbers of night fighters. But the defences over Wuppertal were not impressive.

All R.C.A.F. squadrons participated in this raid. The Lion Squadron had been non-operational since the first of the month as they were converting from Wellington to Halifax aircraft, so that Wuppertal was the unit's first operational task in Halifaxes. Four of their aircraft were hit by flak, but all returned safely. An aircraft of another Canadian squadron, piloted by Sgt. G. R. Fraser, was heavily attacked by flak while over the target area. The bombs were jettisoned and evasive action, which lasted almost half an hour, was taken. On the return journey a Ju. 88 came in from port astern and a little above. Our rear gunner fired three bursts which were replied to by one burst from the enemy aircraft before it dived away. To add to the anxiety of the crew the wireless operator air gunner became seriously ill and had to be taken to hospital immediately on landing.

Another aircraft, captained by FS A. R. Grubert, was attacked twice by an enemy aircraft on its return journey. The first attack was successfully evaded, due to the instructions given the captain by the air gunner, Sgt. B. D. Boynton. In the second attack Boynton got his sights on the attacker and shot it down in flames. He maintained great coolness during the combat and it was due to his efforts that his own aircraft made a safe return undamaged, for which he was awarded the Distinguished Flying Medal.

Mine-laying from the air was carried out on a big scale during May, and it is known that between the 2nd and 23rd two minesweepers, a motor vessel and six steamers, ranging in tonnage from 600 to 5,500, were sunk after striking mines. Our squadrons took part in mining operations on five nights in the month, their biggest efforts being on the 16th and list, when four squadrons successfully laid their mines. Sgt. C. A. Griffiths, who was on his first solo effort on the night of the 10th, successfully laid one mine but the other was found to be hung up. Five runs were made in an effort to drop the mine in the allotted area, but it could not

be released, owing to a mechanical defect. WO A. Harrison, at the controls of another R.C.A.F. aircraft, had successfully laid his mines in the allotted area on the night of the 21st, when, returning home, he saw an S.O.S. flashed on a red Aldis lamp. Then a single red star cartridge was fired. The pilot, circling, saw a round object with a dark centre from which lights appeared. The position was reported by W/T and upon investigation by the air-sea rescue it turned out to be a dinghy from which the crew was rescued.

June

Thirteen days of enforced inactivity for Bomber Command, caused by persistent early morning sea mist and fog over British aerodromes, proved to be the lull before the greatest aerial storm which had yet broken on Germany. On the night of June 11th, the strongest force of four-engined bombers ever sent out dropped a record weight of considerably more than 2,000 tons on the Ruhr and Rhineland, with Düsseldorf and Munster as the main targets.

All R.C.A.F. squadrons took part in the Düsseldorf raid, which lasted just over an hour and was highly concentrated. So many big fires were caused that crews making their bombing runs toward the end of the raid found columns of black smoke reaching to about 20,000 feet. Before the attack had lasted many minutes, there were two vivid explosions and one pilot reported that an especially big blaze seemed to be a quarter of a mile square. The ground defences were very active at the start, but were gradually overpowered. Searchlights also worked in co-operation with a large force of night fighters. So heavy was the attack that smoke was still rising from smouldering fires in the city a week after the raid and a preliminary assessment of aerial photographs revealed that more than 1,000 acres had been devastated.

Düsseldorf was regarded as so essential to the enemy

war effort that when almost 400 acres of it were destroyed by a heavy raid in the summer of 1942, a great effort at reconstruction was made. The work was steadily pushed ahead all autumn and winter, but now a single night's bombing had undone all the Germans' efforts. A great deal of the damage was caused by fire, which must have swept unchecked through whole districts. Factories which had been completely rebuilt were just as completely destroyed again.

The raid on Düsseldorf was the R.C.A.F.'s greatest June effort. In the middle of the month another of the R.C.A.F. units started conversion from Wellingtons to Halifaxes, though eight of its crews were attached to another R.C.A.F. squadron and continued operations until toward the end of the month. At the same time, a second R.C.A.F. squadron started conversion from Wellingtons to Lancasters and so ceased operations, while the month also saw the formation of an additional squadron.

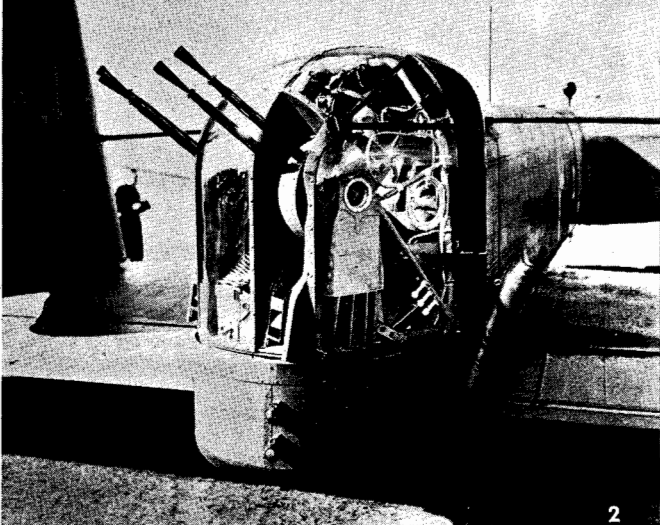
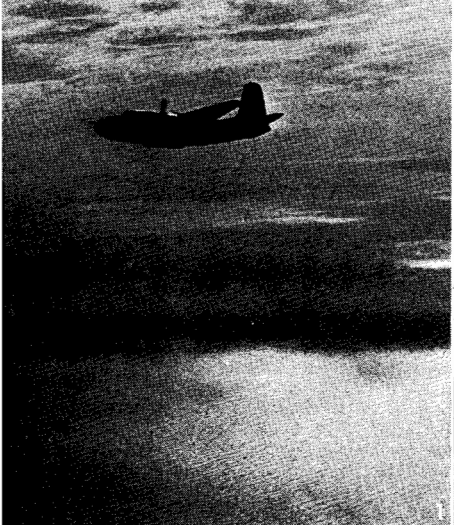
On the night following the raid on Düsseldorf, Bochum was the target for an attack which was so concentrated that 4,000-lb. bombs were dropped at the rate of five a minute. Aircraft came over the target in such a steady stream that pilots had to be constantly on the lookout to avoid collisions. The defences had been strengthened since the last raid on May 13th, but the crews allowed nothing to deter them from reaching their targets. When the great force of bombers had finished their work a large number of fires and several explosions bore witness to their thoroughness.

Bochum, which lies at the eastern end of the central Ruhr, is an important centre of transport and heavy industries. In addition to iron and coal, its industries include chemical plants and branches of the Krupp concern.

Two R.C.A.F. crews claimed enemy night fighters shot down in this raid. After bombing the target one aircraft, piloted by FS M. F. Gray, was attacked by a Ju. 88 which was shot down by the rear gunner, P/O R. Harling. The



Lorient, France, showing heavy bomb damage.



1. A Boston night intruder crosses the sea on its way to attack railways, aerodromes and other targets in enemy-occupied France. 2. The rear gunner's turret on a Whitley.
3. W/C J. P. McCarthy, D.F.C. 4. G/C J. E. Fauquier, D.S.O., D.F.C. 5. F/L J. V. Watts, D.F.C. 6. W/C R. J. Lane, D.S.O., D.F.C.
7. Air crew of an R.C.A.F. Hudson studies the map while the ground crew bombs up the aircraft in readiness for a night attack on enemy convoys. *Associated Press Photo.*

other aircraft, captained by Sgt. C. M. Coutlee, while sixty miles from the Dutch coast on the return journey, was attacked by a night fighter, which the rear gunner, Sgt. W. H. Barnes, was successful in shooting down.

The Schneider works at Le Creusot, 170 miles south of Paris formed the target on the night of June 19th, when a few R.C.A.F. squadrons participated. The raid was carried out entirely by four-engined bombers which, after leaving the English coast, found conditions ideal for bombing. In view of the importance of the objective strong opposition had been expected. However, only light flak opposed the bombers and, although conditions favoured interceptions, very few night fighters were seen. With little to disturb their bombing runs the crews were able to take accurate aim. Fires took hold rapidly. and after fifteen minutes two explosions occurred in quick succession. A third, near the end of the raid, was followed by columns of smoke 3,000 feet high.

Sgt. M. Chepil, the pilot of one aircraft, had the hydraulic system and one engine become u/s after crossing the enemy coast. In spite of this the target was bombed after the bomb doors had been opened by the emergency method and the damaged aircraft was flown successfully back to base. For his "display of outstanding determination in the face of difficulties" Chepil was awarded the D.F.M.

The attack on Krefeld on the 21st was the second largest effort of the month for the R.C.A.F. Several squadrons contributed aircraft, of which 10 were reported missing out of a total Bomber Command loss of 44. The percentage of loss was higher than average, but in view of the well-defended target, the bright moonlight and the success of the raid, it was by no means excessive. Among those reported missing was W/C J. Coverdale, the commanding officer of one of the R.C.A.F. squadrons. The enemy did not appear to expect an attack on Krefeld, for the city's defences were slow to open up and within a short time had been over-

whelmed, with searchlights wavering and most guns silenced. However, a larger force of night fighters than usual was sent up to take advantage of the moonlight, and a number of combats were reported by our crews. The whole target seemed to be one solid mass of fires, glowing red and giving off great clouds of thick smoke.

The next night Mülheim was for the first time named as the main target for our bombers. Though one of the smaller towns of the Ruhr valley, Mülheim is important because of its steelworks, coke ovens and by-product factories and as a busy railway centre. To reach the town the bombers had to battle their way through the strong defences of the Ruhr and run the gauntlet of a barrage from a great many guns and powerful cones of searchlights, to say nothing of a horde of night fighters. Experienced crews regarded the ground defences as being as fierce as any they had encountered.

W/C J. L. Savard, the officer commanding one of the R.C.A.F. squadrons, was missing after this raid on Mülheim. Just the day previous it had been announced that he had been awarded the D.F.C. for his fine flying record and his work as squadron commander. He had been on numerous operations against the most heavily defended targets and had throughout shown great courage on operations, being most keen for attacks against strongly defended objectives. His untiring efforts and splendid example had done much towards establishing squadron *esprit-de-corps* and had succeeded in bringing the unit to a high state of efficiency. His loss was very keenly felt.

Continuing its offensive with unabated fury, Bomber Command attacked Wuppertal in great strength on the 24th. Wuppertal was the name given in 1929 to the amalgamated towns of Barmen and Elberfeld. The former had undergone one of the most terrible poundings of the war on May 29th, when more than 1,000 acres were laid waste by about 1,500 tons of high explosives and incendiaries. It was stated offi-

cially after that attack that “no industrial town in Germany has, up to the present, been so completely wiped off the map”. Reports suggest that a similar fate befell the twin town of Elberfeld in this later attack.

The defences were reported to be very heavy on the way in, but over the target opposition was only moderate. In spite of apparently increased efforts on the Huns’ part to stop the attack, losses were relatively lower than they had been, which was no doubt due in part to the lack of moonlight.

On the way home, ten miles south of Antwerp, an R.C.A.F. aircraft, piloted by P/O J. Valentine, was attacked four times by an unidentified fighter. The first two attacks failed as the pilot took corkscrew evasive action. In the third attack the kite was hit by cannon shell and the rear gunner, Sgt. G. Cheesewright, badly wounded, but this and a fourth attack were survived and the pilot finally brought his aircraft safely home.

The target the following night was the Bochum-Gelsenkirchen district and although clouds prevented a full observation of the results, big fires were burning in this important coal mining and railway communications centre before our bombers left for home.

The Bochum-Gelsenkirchen district lies in the heart of the Ruhr. An intense barrage was put up from Essen, Duisburg, Krefeld, Mülheim and Oberhausen, but the huge searchlight belt of the Ruhr was handicapped because of cloud. Instead of trying to cone our bombers the Germans directed the searchlights at the base of the cloud, so that the bombers would be silhouetted and thus could be picked up by the night fighters. There were many running fights all the way along the route from the Belgian coast through the Ruhr and back again which, however, were not successful in stopping our bombers and the clouds over the target were soon glowing from the light of the fires which were started.

Sgt. D. M. Smith, one of the Canadian pilots, had an

encounter with a Me. 109 after dropping his bombs.. His aircraft was hit and a fire started in the bomb bay, which was extinguished by the wind during a violent dive. The wireless operator and the bomb aimer were injured, but in the face of these harassing circumstances the pilot's skill and resource brought the bomber safely home, where a crash landing was effected. For this fine effort Smith was awarded the Distinguished Flying Medal.

The last operation of the month was on the 28th, when hundreds of our heaviest bombers revisited Cologne despite rather unfavourable weather. Though the clouds were thick they could not prevent the bomber crews from seeing the great fires started by their bombs. Where there was cloud, the red glow was reflected and where there was clear sky the fires were seen to be immense. One was exceptionally large, throwing up smoke to a height of 12,000 feet, and just before 2 a.m. there was a vivid explosion in the southern part of the city.

The Northern Lights, which lit up the sky above the cloud, helped enemy fighters to make interceptions and a number of combats resulted. P/O D. M. Arnot, the captain of one R.C.A.F. aircraft which was attacked on the way to the target, managed to shake the attacker off, but not before his aircraft had been hit and damaged. Arnot continued to the target area only to find that the bomb doors had been damaged and would not open, so he was forced to bring his load back to base where a safe landing was effected. Another aircraft, piloted by F/L V. F. Ganderton, was attacked by an enemy fighter over Holland on the way in and was so badly damaged by cannon fire that the pilot had to turn back. After jettisoning the bomb load the aircraft was nursed back to England where, owing to damage to the controls, the whole crew had to bale out. Ganderton's courage and determination won for him the D.F.C.

Mining operations were carried out frequently during the month.

July

Weather was suitable for operations in the first half of July and between the 3rd and 15th heavy attacks were made on Cologne, Gelsenkirchen, Turin, Aachen and Montbéliard. Ten days of unsatisfactory operational weather then intervened and it was not until the 24th that large scale attacks were resumed. Essen and Remscheid were the targets on two occasions, and Hamburg was given the heaviest air bombardment of the war when it was attacked on the nights of the 24th, 27th and 29th. In co-ordination with these attacks, the U.S.A.A.F. made two daylight raids on Hamburg and a final operation in the first days of August almost completely devastated the city.

The month's first raid on Germany was made on the night of the 3rd, when a large force, to which many R.C.A.F. squadrons contributed, attacked the Cologne area. The attack concentrated on Kalk and Deutz, two congested industrial districts on the east bank of the Rhine.

Kalk, Deutz and Mülheim form a compact area of about five square miles, fully half of which consists of industrial buildings and railways and in which are situated some of Germany's most important industries. Among the vital military targets are the Humboldt-Deutz works, which produce a large proportion of the enemy's U-boat diesel engines, and the Gottfried Hagen works, one of the enemy's largest producers of accumulators.

The attack lasted about forty-five minutes and at the end large fires studded the whole area, from which clouds of smoke rose to a height of 10,000 feet and could be seen 100 miles away. There were two heavy explosions.

Many night fighters were up and one R.C.A.F. aircraft, piloted by Sgt. J. A. Phillips, was attacked about fourteen miles southwest of Cologne by an unidentified single-engined enemy aircraft. The enemy's first burst tore into the starboard tailplane and the exploding cannon shells jammed or broke the controls, so that evasive action was

not possible. The rear gunner, Sgt. L. D. Kohnke, fired one long burst during the attack and claimed the enemy aircraft as damaged. Despite the severe damage to the Halifax the pilot continued his run on the target, only to find that the hydraulics were unserviceable and the bomb doors would not open even manually. Phillips displayed much skill in bringing his damaged aircraft back to base and was rewarded by being given the Distinguished Flying Medal.

Another of our aircraft on this raid was hit by flak, which rendered the intercom. and oxygen u/s and pierced the port nacelle tank. In spite of this damage the pilot, Sgt. R. C. Burgess, continued on to the target, which was bombed successfully.

Cologne was again the target for an attack on the night of July 8th, but R.C.A.F. squadrons did not participate.

The next night R.C.A.F. squadrons took part in a raid on Gelsenkirchen. Heavy cloud was encountered over the target area, so that few results were observed. However, the crews reported a large explosion, the reflection of which lit up the aircraft through the clouds, and a faint reflection of fires was seen.

Immediately after bombing the target, one aircraft, captained by F/O G. Bennett, was hit by incendiaries which entered the fuselage, started a fire and rendered much equipment, including the hydraulic systems, unserviceable. Some of the missiles landed on the navigator's table, while others dropped on the port wing and on the starboard side of the aircraft and remained there. The wireless operator, Sgt. A. Rodgers, with the help of the flight engineer and the bomb aimer, managed to get the fire inside the aircraft under control in approximately twelve minutes. In the meantime, Bennett coolly put the aircraft into a dive and the force of the wind extinguished the flames on the fabric. Bennett then flew the damaged aircraft safely back to base. His skill and resource were rewarded by a Distinguished Flying Cross, while Rodgers received the Distinguished

Flying Medal for initiative and promptness displayed in the emergency.

Aachen, an important railway, coal and heavy industry centre in western Germany, was the target on the 13th. It has extensive marshalling yards and bridges and is a junction for the main railway lines from Germany to France and the Low Countries. The target was obscured by cloud, but through gaps many fires were seen to be taking hold and a number of large explosions were observed.

Opposition from the ground defences was slight, but several of our aircraft encountered enemy night fighters. F/O D. T. Bain's aircraft was attacked about five minutes before reaching the target and badly shot up. The captain was successful in evading further damage and proceeded to the target, but then found that the hydraulics and bomb doors would not operate. On the return journey, Bain outmanoeuvred two enemy fighters. Arriving over his home base, it was discovered that the undercarriage could not be lowered and as a full bomb load was still aboard, making it impossible to crash land, the captain ordered all the crew members to bale out. The aircraft crashed into the side of a hill approximately 12½ miles from the aerodrome and the bomb load exploded. In recognition of his superb airmanship, commendable courage and fine fighting spirit in circumstances of great difficulty, Bain—who had broken his leg when he landed by parachute—was awarded the D.F.C.

Another aircraft, piloted by F/L W. N. Keddie, after bombing the target successfully, was attacked three times by enemy aircraft, one of which (a Ju. 88) was shot down by the rear gunner, F/O R. J. Wagner. The flight engineer and the mid-upper gunner confirmed the kill.

On the 15th, Bomber Command made its first raid on the Peugeot motor works at Montbéliard, ten miles south of Belfort and only a short distance from the Swiss frontier. The Peugeot works specialize in the building of two-ton trucks and their importance as a source of Axis transport

has been increased because of the havoc caused by the Allied air forces to the Renault and Matford works on the outskirts of Paris. About 10,000 people are employed at the Montbéliard plant, the output of which is believed to be between 6,000 and 8,000 trucks a year in addition to armoured fighting vehicles.

Conditions favoured a concentrated attack. A clear night had purposely been chosen to avoid unnecessary casualties to the French civilian population. The target stood out with exceptional clearness and photographs confirmed the crews' reports of heavy damage throughout the factory area. The ground defences were slight, the few guns in operation being silenced, though there were a number of interceptions by night fighters. One aircraft, piloted by P/O M. Sattler, was attacked by an enemy aircraft wearing British camouflage and roundels which was identified by both gunners as a Do. 217. The Halifax took violent corkscrew evasive action, but the enemy aircraft was persistent, making seven or eight attacks. F/O W. R. W. Anderson, the mid-upper gunner, was wounded four times in the left arm, but continued firing until the enemy aircraft was sent diving with one engine in flames. It was seen to crash into the ground, where it continued to burn. Andy Anderson displayed the highest courage and devotion to duty while wounded during these attacks, and was awarded the Distinguished Flying Cross.

The outstanding event of the month was the commencement of the Battle of Hamburg. This city, the second largest in Germany, was subjected to a terrific battering in three devastating raids, on the 24th, 27th, and 28th, when widespread destruction was caused to shipyards, industrial and residential districts. All these attacks were made in perfect weather conditions and there is no doubt that the damage wreaked was on a scale unparalleled in air warfare. In the first attack heavy cloud was encountered as far as the enemy coast, but weather over the target was good, with

visibility clear until marred by the intense pall of smoke which rose from the burning city. Crews were able to identify the target and all reports indicated the accurate placing of the target indicators, which were followed by a heavy concentration of bombing when a record load of over 2,300 tons was dropped. Dense black smoke rose four miles into the air and many violent explosions were reported.

The casualties were extraordinarily light considering the great force which was sent out, particularly when it is realized that Hamburg is one of the most heavily defended cities in Germany.. None of the R.C.A.F. aircraft was missing on this raid.

The weather was again clear over Hamburg three nights later when another large force attacked. Early arrivals identified the target and found fires still burning from previous day and night attacks. By the time later waves arrived, huge columns of smoke rising to 22,000 feet obscured the target but did not prevent fires being seen from as far distant as 200 miles. The captain of one R.C.A.F. aircraft reported that "the general impression was of a volcano belching fire and smoke with sparks scattered around the base".

Searchlights were numerous but for the most part ineffective, and although light and heavy flak was intense at the start, the defences were saturated towards the height of the raid. W/C M. M. Fleming, D.F.C., commanding *officer* of one of the R.C.A.F. squadrons, reported that the gravest danger was risk of collision with other aircraft over the target, his own having four near misses. One of our aircraft was hit by incendiaries from an aircraft above and sustained some damage, but only one Canadian kite was reported missing. The pilot of the missing aircraft was W/C Jimmy Piddington, the popular commanding *officer* of one of the Canadian units.

The third heavy attack on Hamburg, on the 29th, was comparable in effect with the earlier forays. As the first aircraft approached the city, fires of previous raids were seen

45 miles away. While the haze and smoke prevented identification of ground detail, before the end of the raid large new fires broke out over a wide area.

More searchlights were operating than on the two previous occasions and a large number of night fighters were in action, but the flak was not particularly effective. One aircraft, piloted by P/O G. P. Vandekerckhove, was attacked by enemy fighters after the target had been successfully bombed. Sgt. J. J. McLean, the rear gunner, opened fire and was credited with one Hun probably destroyed. F/O B. A. St. Louis, the pilot of another kite, reported that, on the run-up to the target, the aircraft was coned by a great many searchlights and held in their rays all the time he was over the target and on his way out. The aircraft was hit by heavy flak in the port outer fuel tank, but the pilot was able to fly it safely to base. F/O N. S. McIntyre, another pilot, reached base safely after being hit during the bombing run by flak which set the starboard inner engine on fire and caused the port inner engine to become partly unserviceable.

W/C H. W. Kerby, the commanding officer of one of the R.C.A.F. squadrons, and formerly C.O. Of 400 Squadron, was the pilot of one of the two aircraft missing on this raid.

Between the first two attacks on Hamburg, a heavy attack was made on Essen on the 25th. Seven R.C.A.F. squadrons contributed aircraft, of which three were reported missing. The night was very dark but clear, with only the usual Ruhr industrial haze over the target. As the attack developed the cloud gave place to a dense pall of smoke, but, throughout, crews found no difficulty in seeing the P.F.F. markers which were dropped very close together and with exemplary timing. Numerous fires were seen concentrated around the markers and at intervals a large number of spectacular explosions occurred. Thick clouds of greyish white smoke billowed up to 22,000 feet, and flames

which arose to great heights from huge fires were clearly seen from 150 miles away on the homeward route. The guns and searchlights of the Ruhr were as numerous as ever, but their attempts to engage our aircraft were rapidly disorganized, and the defences degenerated into a dwindling barrage of heavy flak and a network of aimlessly groping beams.

While over the target one of our aircraft, captained by S/L C. B. Sinton, was struck by heavy flak which put one engine out of action and damaged the port petrol tank. The aircraft was flown back to the enemy coast on two engines and then, to conserve fuel, one engine only was used for the North Sea crossing. As it was impossible to effect a safe landing on the field, the pilot flew the bomber out to sea, rapidly losing height, and came down on the water approximately a mile from shore. After ensuring that all his comrades were safely out of the aircraft, Sinton supported one of them until rescued half a mile from shore. He displayed great skill and determination throughout and was mainly responsible for the ultimate safety of the crew. For this he was awarded the D.F.C.

Another aircraft, piloted by FS R. Stewart, made its run over the target in a very heavy barrage, between two lines of cones of thirty to forty searchlights. On the homeward trip, following a successful bombing of the target and just after leaving the French coast, the aircraft was attacked by a FW. 190 which the second gunner, Sgt. L. Northcliffe, shot down. The remainder of the journey was uneventful and the aircraft landed safely at base.

On the 30th, the last night attack of the month was against Remscheid, an industrial town between the Ruhr and the Rhine, noted for its precision machine tools. Two R.C.A.F. kites failed to return.

The weather was good en route and over the target, with fair visibility, no cloud and only slight haze. Searchlights and guns were busy over the Ruhr and Düsseldorf as

the bombers approached their target, but over Remscheid itself the defences were extremely moderate. Toward the end of the bombing, smoke covered most of the town, while fires could be seen from the Dutch coast on the return journey.

Mine-laying operations were carried out on a small scale during July, as the short nights precluded the possibility of visiting the more distant targets.

On the night of the 6th, flak ships were encountered and two captains reported damage to their aircraft from the accurate fire of these vessels.

August

The Bluenose Squadron, with W/C C. E. (Tiny) Harris as its C.O., carried out its first operation on August 12th, when its aircraft were detailed to attack Milan. It was exactly two months since the squadron had started to form "from scratch", on a half-completed station, and going from nothing to a fullfledged operational effort in that time was no mean achievement.

The first operation of the month took place on the 2nd, when Hamburg was again the target, making the eighth attack of this series. The crews on this latest raid had to contend with very difficult weather conditions—heavy icing and severe electrical storms. Blue flashes played around the tips of the propellers and on the bombers' guns, and the machines were rocked by violent winds. One aircraft, captained by Sgt. M. M. Humphreys, was forced to abandon its task due to severe icing causing a loss of height at the rate of 400 feet a minute. Just prior to the decision to turn back, the aircraft was hit by lightning, all four engines cut momentarily and the plane dropped 500 feet. All the instruments went u/s and it was twenty minutes before the gyrocompass settled down and instruments returned to normal.

Vandekerckhove and crew had a difficult time. The constant speed unit on his starboard outer engine went u/s

and on top of that, heavy icing was experienced. Owing to the drag on the starboard side, the machine came down to 4,000 feet over the Kiel Canal, but the crew without exception decided to stay with the ship and try to get it home, which they finally did after a hard struggle. Clouds hampered the searchlights and anti-aircraft guns, but many fighters tried to intercept the raiders. One aircraft, captained by FS H. L. Pattinson, was chased by two Me. 109Fs, one acting as decoy and the other making an attack. Our aircraft, after shaking the night fighters, turned back on to its course and bombed the target successfully.

The crews of the aircraft which were successful in attacking Hamburg reported that the fires were fairly well concentrated and could be seen for over 100 miles on the return journey.

The next night attack in which R.C.A.F. squadrons participated was on the 9th, against the twin upper-Rhineland towns of Mannheim and Ludwigshafen.

The defences on the coast seemed to have been increased and were quite active, but over the target area itself they were poor and inaccurate. Heavy flak was ineffective and the searchlights were wavering and useless. Enemy fighters, however, were active and one Canadian aircraft, captained by FS W. Biggs, was attacked by a FW. 190 shortly after bombing the target. The enemy was eventually shot down but the bomber sustained extensive damage, the starboard wing being set alight between the fuselage and the inner engine and the control column damaged. Sgt. J. Elliott, the flight engineer, managed to extinguish the flames after making a hole in the side of the fuselage with an axe, while Sgt. L. H. Moyler, the wireless operator air gunner, though wounded, rendered valuable assistance. The aircraft became exceedingly difficult to control, requiring almost superhuman efforts to maintain level flight. Nevertheless Biggs battled on and finally reached England. For their courage and perseverance in the face of great difficul-

ties Biggs, Elliott and Moyler received the Distinguished Flying Medal.

The next night Nuremberg was attacked by a force which included aircraft contributed by a few R.C.A.F. squadrons, of which none was reported missing. Almost all the way to Nuremberg the crews flew through cloud, but near their objective the sky was clearer. Over the city conditions were sufficiently good to permit accurate bombing and to see several large orange explosions and many fires, some of which had reached huge proportions before the raid ended. The bright glow of fires could be seen on the clouds for an hour after leaving the target.

The ground defences were few and ineffective, though again night fighters were active and made determined attempts all along the route to intercept the bombers. The rear gunner of one aircraft, piloted by F/O J. A. Westland, sighted an enemy aircraft just after crossing the French coast on the way in. When first sighted, it was on the starboard quarter at a range of 900 yards, 100 feet up, flying on a parallel course. Jerry closed in to 500 yards and was about to turn in to attack when Sgt. W. S. Atkinson, our rear gunner, opened fire with a short burst and gave instructions for evasive action—a diving turn to starboard. A second burst was fired at 400 yards but from only two of the four guns, owing to a stoppage during the first burst. The enemy aircraft did not return the fire and after the second burst broke off to port and was not seen again. Later on in the same night the Halifax was again attacked by a Ju. 88 but evasive action proved successful and the fighter was lost to view.

Another aircraft, piloted by Sgt. C. Wilson, was attacked by a Me. 109 just after its bombs had been released on the target. The rear and mid-upper gunners both fired bursts and the enemy broke away at 300 yards, climbing to port. Strikes were observed on the Me., which appeared to buck from the concentrated fire of the two gunners and did

not return the fire.

Nuremberg was again the target on the night of the 27th when, of the numerous R.C.A.F. aircraft which set out, two were reported missing. The raid appeared to be a success, as numerous large fires, the glow from which could be seen 70 miles away, were reported in the target area accompanied by many explosions.

Once more enemy night fighters were active and many encounters were reported. One of our aircraft, piloted by Gaunt, who had been commissioned a 2nd Lt. in the U.S.A.A.F. but was completing his tour of operations with the R.C.A.F., was attacked by an unidentified night fighter, which carried a spotlight in its nose. The Jerry, which was first sighted by the rear and mid-upper gunners on the starboard quarter, overtook our aircraft and turned in for a beam attack. The mid-upper gunner ordered evasive action and opened fire. The enemy fighter closed in, but suddenly broke away in a diving turn to starboard without opening fire and disappeared in cloud. A few minutes later the crew saw an explosion just below where it had disappeared and the enemy aircraft was claimed as destroyed.

The flight engineer of another aircraft, piloted by Sgt. C. M. Coutlee, sighted an unidentified aircraft on the starboard quarter about 600 yards up. The rear gunner, Sgt. W. H. Barnes, immediately ordered evasive action, a corkscrew to starboard, and opened fire as soon as he could bring his guns to bear. The enemy aircraft received five medium bursts, the first appearing to be accurate, and with the second burst the Jerry broke into flames. As the fighter started going down Barnes gave it three more bursts, and a few minutes later it hit the ground and exploded. Several other encounters with enemy aircraft were also reported, but, due to successful evasive tactics, combat was either avoided or indecisive.

Another of our aircraft, flown by F/O H. T. Brown, had one engine go u/s 20 miles from the target. Despite this, he

carried on and, although losing height steadily, bombed the target from 9,000 feet and returned at that height on three engines, sustaining only very slight flak damage.

On the night of the 12th, Bomber Command switched its attention to Italy and on four nights—August 12th, 14th, 15th and 16th—Milan and Turin bore the brunt of heavy attacks. Several R.C.A.F. squadrons took part on the night of the 12th, all their aircraft returning safely. R.C.A.F. squadrons did not participate in the attacks on the 14th and 15th, but on the 16th the Pathfinder Squadron contributed aircraft, of which one was reported missing, in an attack on Turin.

Visibility was excellent on the night of the 12th, and reports indicated that the attacks were successful. At Milan many well concentrated fires were seen, and an especially large blaze broke out in the centre of the target. Smoke rose to a height of from 10,000 to 12,000 feet and the reflection of the fires against cloud could be seen at Lake Bourget. At Turin the target was identified by many of the crews, and fires, flares and incendiaries brightly illuminated the area around the aiming point. Violent bomb explosions and numerous fires, which appeared to have taken a good hold, were well concentrated.

The route was free of flak and fighters and the target areas were only weakly defended. One of our aircraft, however, piloted by FS R. E. Countess, had one of its engines put out of action, making it impossible for the pilot to gain enough height to cross the Alps. Rather than bale out over enemy territory, a rough course was set for the African coast where a safe landing was made. Its return to base was eagerly awaited by the squadron, who felt sure it would come back “bombed up” with fruit!

On the 17th, Bomber Command struck at the research and development establishment at Peenemunde, on the Baltic coast, approximately 60 miles north-west of Stettin and 700 miles from Britain. This establishment, the largest and

most important of its kind in the Reich, specializes in aircraft radio-location and armament development. It lies in a very strongly defended area and the bombers had to fight their way against strong opposition from great numbers of German fighters. Flak and searchlights were, ineffective over the actual target, which was, however, covered by a very effective smoke screen.

A goodly number of R.C.A.F. squadrons participated in this raid and lost 10 aircraft. W/C Crooks, the commanding officer of the Thunderbird Squadron, was among those missing, as was also F/L D. D. Shuttleworth, who only the previous day had received word that he had been awarded the Distinguished Flying Cross for his all-round good work.

Despite Bomber Command's loss of 41 aircraft, the raid was considered successful, as well over 1,500 tons of high explosives and incendiaries were dropped, causing very large fires, the flames of which could be seen 100 miles away. Crews also reported two large explosions which emitted huge yellow-coloured flames.

Sgt. R. McNamara, the rear gunner of an R.C.A.F. aircraft captained by Sgt. W. H. Smitt, claimed a Me. 109 shot down. Our aircraft was attacked just after releasing its bomb load and considerable damage was suffered before the Me. was disposed of on its fourth attack.

Another new target, Leverkusen, was attacked on the 22nd. The visibility, however, was poor due to heavy clouds over the target area, and preliminary reports indicated that the raid was scattered and inconclusive. Several scattered fires and two big explosions were seen. Fairly concentrated heavy flak was encountered in the target area but searchlights were ineffective.

Night fighters were up in strength and there were several encounters. A Lancaster, piloted by S/L J. B. Millward, D.F.C., was intercepted by a Me. 109 on the return journey. When first sighted, the enemy was engaging a Halifax, but broke off that engagement and appeared on the starboard

beam of the Lancaster, commencing its attack from 700 feet. The rear gunner, P/O W. M. Maxwell, D.F.C., instructed the pilot to corkscrew to starboard and opened fire at approximately 450 feet. Hits were observed on the enemy aircraft, which broke off and a few minutes later was seen by the crew to crash in flames.

Another Lancaster, piloted by F/L A. J. Hughes, was attacked by an unidentified enemy aircraft before commencing its bombing run. Both gunners opened fire after instructing the pilot to corkscrew and the enemy aircraft broke away without returning the fire. Later, on the homeward journey, the same aircraft was attacked by a Ju. 88, which was sighted by the bomb aimer on the starboard bow. The pilot corkscrewed and the enemy aircraft did not press home its initial attack. Turning sharply, however, the Jerry attacked a second time and both gunners opened fire at 350 yards. Again the pilot corkscrewed and once more the enemy aircraft broke away. A third attack was made, but finally the Ju. broke off and was not seen again. Before the end of the attacks the mid-upper gunner's sights became completely, and the rear turret partially, u/s. But the liaison between the gunners and the pilot was so good and the evasive action so successful that the enemy's efforts were foiled and the bomber was able to return safely to base.

In this attack on Leverkusen first mention was made of the carrying of the comparatively new 8,000-lb. bombs by aircraft of R.C.A.F. squadrons. The bombs were carried by Lancasters of the Thunderbird Squadron.

Berlin was the target on the 23rd, when it was attacked by a large force in good visibility. A number of our squadrons contributed aircraft, of which seven were reported missing. Huge explosions and numerous fires were very well concentrated around the markers. The glow of the fires could be seen from Rostock and smoke rose to a height of 15,000 feet.

The defences over Berlin were light. Very little flak was encountered, but searchlights were numerous and co-operated effectively with night fighters. However, the aircraft piloted by WO F. B. Edwards was damaged by flak, which rendered the starboard outer engine u/s, stripped the main plane, holed the petrol tank on the port side and damaged the starboard aileron. Some time later this aircraft had an encounter with a Me. 109 and a Ju. 88, the former of which was believed to have been shot down by Sgt. A. H. Cadeau. Another aircraft, captained by Millward, was coned by searchlights while en route to the target. Violent evasive action was taken, but, despite this, very accurate heavy flak damaged the hydraulics. The pilot decided to bomb South Bremen rather than go on to Berlin, due to the damage to the aircraft, and then course was set for base. By using the emergency air bottle a good landing was made.

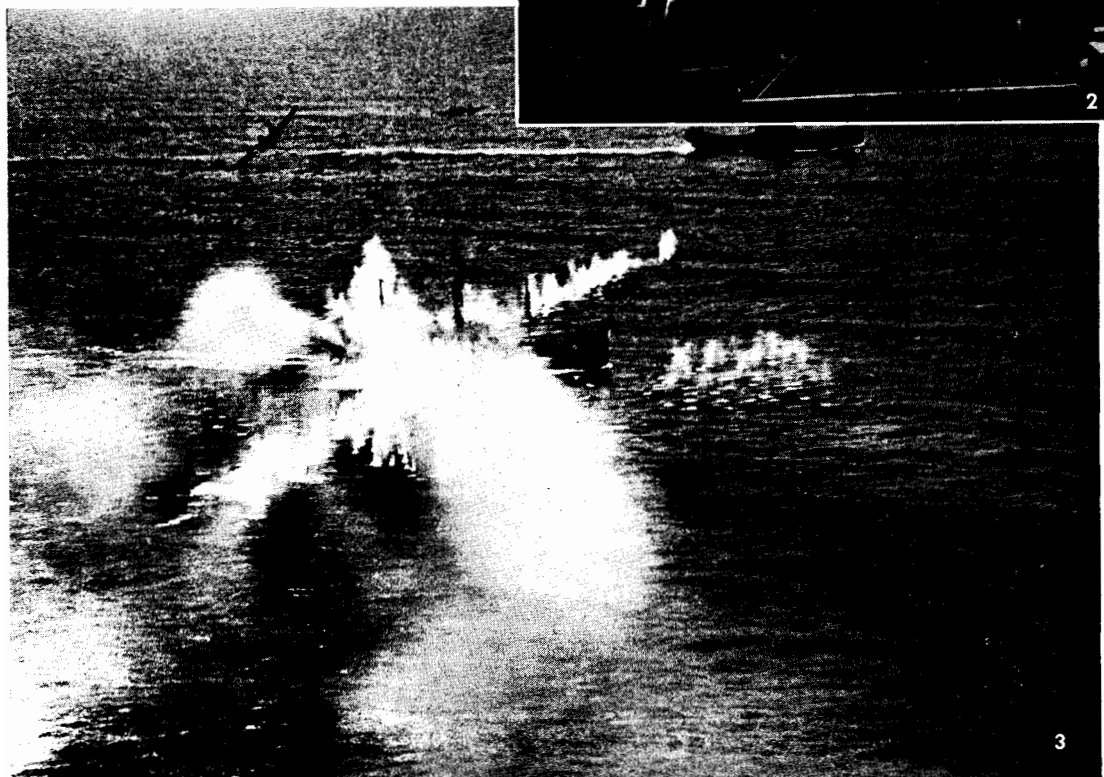
Eight nights later Berlin was again the target, but reports indicated that the fires were scattered. Many large fires were seen, however, and large explosions were observed through gaps in the clouds over the target area. The defences once again seemed slack and lacked concentration, the enemy appearing to depend more and more on his night fighters rather than on his ground installations. Eight R.C.A.F. aircraft were reported missing.

On the night of the 30th a large force set out with MünchenGladbach as the target. Many R.C.A.F. squadrons contributed aircraft, of which three were reported missing. The visibility was good and numerous promising fires and many large explosions were seen. The reflection of the fires on clouds could be seen from Antwerp.

With night fighters out in full force, many combats were reported. Searchlights co-operated with the night fighters by silhouetting our bombers against the convenient clouds, thus making them easier targets. W/C Burnside, the commanding officer of the Lion Squadron, reported that his Halifax was attacked five times by different aircraft.

One of our aircraft, piloted by Westland, was badly damaged in one of the N/F engagements. The rear gunner, Tech./Sgt. B. W. Blount, U.S.A.A.F., sighted an unidentified enemy aircraft, equipped with searchlight, at a range of 500 yards and flying at the same speed. Blount ordered evasive action and opened fire with a long burst of 300 rounds, which started a fire in the enemy kite. Another burst, a few minutes later, caused a large ball of fire in the Hun night fighter, which soon went out of control and crashed in flames.

Another of our aircraft, captained by Sgt. H. L. Bullis, was attacked from the front on the port bow by a FW. 190. After passing under the Halifax, the FW. shot up in a steep climbing roll onto its back and dived to the starboard quarter, swerving over to the port before it came in to make another attack. At a range of 125 yards, Sgt. M. A. Potter, our rear gunner, fired two bursts which caused the enemy aircraft to catch fire and blow up as it hit the ground.



1. Beaufighter in flight above the clouds. 2. Inside an R.C.A.F. Beaufighter, the pilot gives the signal for "chocks away". 3. Enemy shipping suffers a severe attack from R.C.A.F. aircraft.



1. W/C R. M. Christie, D.S.O. 2. F/O G. C. D. Bell, D.F.M. 3. In the light of a northern sunrise mechanics service an R.C.A.F. Blenheim of Coastal Command.

CHAPTER XIII

COASTAL COMMAND

THE most versatile of all R.A.F. Commands is Coastal; it flies from land and sea bases; its aircraft include single- and multi-engined machines, bombers and fighters, landplanes and flying-boats. These diverse aircraft and their crews are engaged in two great tasks—to protect our own shipping against attack by enemy undersea, surface or air raiders, and to destroy the shipping of the enemy. While the aircraft of Bomber Command strike at the enemy's lines of communication and hammer with ever-increasing strength at his bases, their comrades in Coastal Command are fighting day and night in the front lines of the Battle of the Atlantic. Protection is given our own ships by escorting the convoys and maintaining standing anti-submarine patrols over areas through which the U-boats must pass between their bases and their hunting grounds. Enemy naval and merchant shipping is harassed as it attempts to pass along the coasts of German occupied territory by day or night, and the harbours, where vessels might find shelter or from which enemy submarines might operate, receive frequent visits from the bombers of Coastal and Bomber Commands.

Many Types of Aircraft Used

Catalina or Sunderland flying boats and Liberator, Ven-

tura or Fortress landplanes are used for long range anti-submarine patrols, while Wellingtons, Whitleys and Hudsons take care of the medium ranges and Blenheims and Beaufighters do the short range escorts and the reconnaissance work. Unlike the sorties of the other commands, the patrols of Coastal Command are, generally speaking, uneventful, which paradoxically is a testimony to their efficiency. The success of an anti-submarine patrol is not gauged by the number of submarines destroyed, attacked or even sighted, but rather by the regularity with which our shipping is allowed to proceed unmolested on its vital journeys. Certain it is that the ambition of every member of a Coastal Command aircrew is to chalk up a victory over a submarine, but the fact that hour after hour they have circled a convoy as it ploughs its slow way ever nearer its goal with its cargo of men, munitions and supplies, with nary a sign of the tell-tale feather wake from a periscope or torpedo—that also is a victory. U-boats, like the well-known statesman of another day, “do not choose to run” where the aircraft protection is strong and thus the undersea raider has been driven farther and farther afield in his efforts to evade the watchful eye of escorting aircraft. A glance at Coastal Command maps bears witness to this—where the air patrols cease, there begin the areas of most danger to shipping.

The great enemy of Coastal Command aircraft on their long patrols is the weather. An incident from the record book of an R.C.A.F. squadron will illustrate the conditions which pilots, crews and craft may have to face and overcome. Catalina AH569, with P/Os Naish and Riddy, FS Owen, Sgts. Everett, Hughes and Shaw and ACs Bradford and Ward as crew, left its base at 1700 hours (which is 5 p.m. to the ordinary mortal) on November 7th, 1941, to carry out a patrol north of the Shetland Islands. The story of the flight is best told in the words of the captain’s report:

The aircraft was at once enveloped in a wall of hail and snow ex-

cept for one spot where the top of the cloud was approximately 3,000 feet. To avoid icing it was decided to climb above the cloud at this point and proceed to the operational area. . . . It was intended to fly above 3,000 feet until a favourable gap in the clouds was reached, when the aircraft could go down. However, the cloud extended northward, increasing in height. The aircraft climbed to 13,000 feet but even running at full throttle and the maximum permissible revolutions the A.S.I. (air speed indicator) was 70 m.p.h. and the aircraft was failing to climb. The cloud height here must have been 15,000 feet.

At this point (1845 hours) the elevators froze up and it was only by the concentrated effort of both pilots that the correct "attitude" of the aircraft was maintained. At the same time the windscreen iced up and it was only by putting his head out of the window and peering ahead that the pilot was able to avoid further cloud. The temperature at this period was -40 degrees centigrade.

As the cloud height increased northward and grave danger of further icing was imminent if course was maintained through cloud, the pilot turned west and then south where it was apparent that the cloud top decreased in height. When conditions were such that the captain could with safety give his attention to less vital factors a signal was despatched to base (1900 hours) "icing up, returning to base". Bearings were requested repeatedly but after failing to obtain any, on investigation the operational frequency crystals were found to be unserviceable. Attempts were made to get astral fixes, but these could not be obtained because the navigator's breath condensed and froze on the lens of the sextant, whenever it was brought to the sighting position.

(Bearings were presently received from two stations and a new course was worked out by the navigator.) . . . Through gaps in the clouds small islands were seen (at 2250 hours) and . . . they were assumed to be the Orkneys. Set course for A on that basis. . . . At E.T.A. (estimated time of arrival) islands were again seen through cloud gaps and it was realized that the islands seen earlier could not have been the Orkneys and course was flown to return to these islands definitely to establish identity. As B was known to be still available for bearings, this idea was shortly afterwards abandoned, and course was set southward while the operator tried to repair the unserviceable W/T. When this was found to be impracticable, he was instructed to work Stranraer.

At 0025 hours the captain and navigator definitely established pin-point at C (in Northern Ireland). Aircraft had been until now between 9,000 and 13,000 feet with elevators and windscreens still iced up. The temperature in the cabin was such that hot tea froze in a matter of seconds and the second pilot was suffering from badly frozen fingers though wearing gloves.

Weather now (0050 hours) permitted descent to more favourable altitudes and aircraft came down to 2,000 feet. Elevator action became easier proportionately during descent until normal function was obtained at 4,000 feet. Aircraft set course for B and was waterborne there at 0118 hours on November 8th, 1941.

The flight had lasted eight and a quarter hours.

The Battle of the Norwegian Coast

One of our Coastal squadrons has been active for the past two years on short range convoy escorts and reconnaissance patrols to the Faroe Islands and the coast of Norway. It was, at first, equipped with Blenheim fighters carrying a crew of three and, despite the limitations of the Blenheim as a fighter, aircrews of the squadron have destroyed a number of Heinkels, Junkers and Messerschmitts. On many other occasions, while on convoy escort or reconnaissance, they have chased enemy raiders searching for our shipping and have forced them to jettison their bombs. Late in 1942 the Buffalo squadron was re-equipped with Beaufighters and its aircrews began to take an active part in strikes against enemy shipping.

This squadron's regular routine of convoy patrols and reconnaissances has been interspersed with a number of special missions. One of these was the successful commando raid carried out by combined forces of the Navy, Army and Air Force at Vaagso on December 27th, 1941. Our Benhems shared with Beaufighters of Coastal Command in providing fighter cover for the raiding forces from dawn until late afternoon. The work of the fighters was directed by radio from the bridge of one of the naval vessels by S/L E. H. McHardy, D.F.C., a New Zealand officer commanding one of the flights in the R.C.A.F. squadron. There were numerous encounters with enemy aircraft during the day, in which the Canadian Benhems more than held their own against the best fighters the enemy could send up.

In May 1942, this same Blenheim squadron had a simi-

lar role assigned to it during Coastal Command's strike against the *Prinz Eugen*. The German cruiser had been spotted as it left Trondheim on May 16th and R.A.F. reconnaissance aircraft had kept in touch with the ship and its escort of four destroyers as it moved south along the Norwegian coast at high speed. A force of Beaufort torpedo-bombers and Hudson bombers was ordered to attack the vessel and on the evening of May 17th, under fighter cover provided by the R.C.A.F. Blenheim squadron and a formation of Beaufighters, they carried out the scheduled attack as the cruiser was passing Lister. Messerschmitt 109s which were providing cover for the fleeing cruiser and her escort attacked our aircraft and in the course of sharp encounters both sides suffered losses. However, the Beauforts pressed home and released their torpedoes undaunted by the fact that, to quote a member of one of the crews, "the blighters threw everything but the book at us". During this show while W/C P. H. Woodruff, commander of the R.C.A.F. squadron, was making his run-up on a destroyer, two Mes. attacked and damaged his aircraft and wounded his navigator. But the crew returned the fire, hit both fighters and drove them off damaged. FS G. D. C. Bell and other pilots in the Blenheims took on more than one Messerschmitt and, undaunted by the fact that their aircraft, as fighters, were inferior to the Nazis, put up a good fight and by seriously hampering the enemy were able to provide valuable protection for the torpedo-bombers.

At the conclusion of the action, McHardy, piloting a Blenheim, saw that two of the members of the crew of a Beaufighter which had made a forced landing in the sea were without a dinghy, so he circled low and dropped his own dinghy, into which the two men clambered before McHardy again set course for his base.

For their outstanding services in this operation Woodruff received the D.F.C., McHardy a bar to the D.F.C., and Bell the D.F.M. McHardy later succeeded Woodruff and

served for some time as the commanding officer of the squadron. He and his crew appeared in several scenes in the documentary motion picture *Coastal Command*.

The Buffalo squadron's losses in all these activities were slight and this, in view of the fact that they had been flying landplanes far out over the sea in any and all weather, is a tribute to the efficiency and skill of all personnel concerned. Special mention should be made of the navigators, without whose skill the aircraft would, time after time, have been reported missing and the ground crews who laboured long hours to keep the machines fit to take the air. Nor should the Blenheims themselves be forgotten since, though somewhat outmoded, these sturdy aircraft answered all tests to which they were put. In one instance, in December 1941, when a pilot was carrying out a reconnaissance within fifty miles of the Norwegian coast, a propeller flew off—but the remaining engine brought the plane and its crew back the full two hundred and fifty miles to base. This feat was one of those cited when Sergeants R. A. Schoales and P. A. Rogers, the pilot and navigator, were mentioned in despatches.

The last months of 1942 passed in relative quiet. Twice, enemy submarines were sighted by pilots on patrol and on a few occasions enemy aircraft, chiefly Ju. 88s, were seen, but no combats resulted and incidents were few. A special convoy escort completed under difficult conditions in mid-December won for the squadron congratulations from the Air Officer Commanding their Group.

In October McHardy handed over command of the unit to W/C G. G. Truscott. He had first joined this R.C.A.F. squadron in July 1941 and had completed almost fifteen months' service with it as flight commander and squadron commander.

In January 1943 the Buffaloes, now flying Beaufighters, left their far northern base for a period of service in the south of England, returning to Scotland and their Norwe-

gian hunting grounds at the beginning of April.

During their absence another R.C.A.F. Coastal squadron the famous Demons—of which more later—came to northern Scotland for a six-weeks visit. On their Wellington aircraft the Demon crews continued the work which the Buffalo squadron had been doing—patrolling over the sea to Norway, escorting convoys and hunting submarines. Except for one fleeting glimpse of a Blohm and Voss float-plane the Wellington crews had no contact with the enemy during their Scottish tour.

In the spring, however, this zone of operations became much more active and the Buffalo squadron, returning to Scotland early in April, was soon playing an active part in a series of hotly fought actions with enemy convoys and their escorting flak ships and fighters. On these strikes the R.C.A.F. Beaufighters flew in formation with torpedo-carrying Beaufighters of an R.A.F. squadron or Hampdens of an R.N.Z.A.F. unit, the role of the Canadian crews being to engage and neutralize the defending flak ships and fighters while the torpedo-bombers closed in on the merchant vessels.

The first of these actions was fought on April 27th, when a Beaufighter formation intercepted an enemy vessel off the southern tip of Norway. The merchant ship, of 4,000 to 5,000 tons, was guarded by an escort vessel on either side. The six R.C.A.F. Beaufighters promptly engaged the escort, raking them from stem to stern so effectively that the torpedo-planes were able to make their attack unmolested. Three torpedoes were seen to hit the merchant vessel, which was soon enveloped in steam and smoke and listing heavily to port.

The torpedo pilots attributed their success in large measure to the effective manner in which the R.C.A.F. Beaufighters diverted the enemy's fire. Two of the Canadian machines were hit by flak, but all returned safely to their base. Schoales, now a F/O and leader of the R.C.A.F.

flight, attacked the escort vessels while his observer photographed the explosions on the merchant ship. The defensive barrage thrown up by the enemy hit and severely damaged his Beaufighter. One 20mm. shell struck the port engine, causing considerable internal damage; a second penetrated the windscreen fairing and exploded in the cockpit, wounding the pilot in the left arm and piercing the armour panel between his compartment and the observer's. A fire extinguisher, knocked from its bracket, also burst in the pilot's cockpit. Further damage was caused by one of the Beaufighter's H.E. shells which jammed and exploded, bursting the barrel of the cannon and blowing off the cannon doors. Despite his wound and the damaged condition of his aircraft, Schoales brought his Beaufighter home—the second occasion on which he had flown a damaged machine back to base from the Norwegian coast.

This latest exploit won for Schoales the D.F.C. Joining the squadron on its formation in May 1941 he had completed almost two years' active service flying at the time he was wounded. His "quiet determination, fine fighting spirit and complete disregard "for his personal safety", as well as his readiness "to undertake any task, however hazardous", were commended as "an inspiration to the other members of the squadron".

Four days after the successful strike of April 27th another strong Beaufighter force was sent out on a shipping reconnaissance off the Norwegian coast. As the Beaus swept along at sea level from Lister to Ekero in search of their target, enemy fighters came out to intercept them while shore batteries opened heavy fire. One of the R.C.A.F. machines was engaged by two of the enemy and badly shot up, sustaining 100 hits in the engines, fuselage, planes, tail assembly and propellers, but got back to base. Another of our Beaufighters with a crew of P/O S. J. Flannery and F/O B. J. Wright did not return.

Weather conditions were very bad on May 5th, when

four R.C.A.F. Beaufighters again went out as flak protection escort to four torpedo-carrying Hampdens of a New Zealand squadron. With 10/10ths cloud pressing down close to the sea and restricting visibility to a bare 400 yards, it is not surprising that three of the Beaufighters lost the formation and had to return. The fourth crew, F/Ls J. T. McCutcheon and J. L. Moore, stuck close to the Hampdens until they reached the Norwegian coast, located their target—a 4,000-ton merchant vessel—and attacked under heavy flak fire from the escort ships.

A spell of bad weather then restricted flying for several days and conditions were still far from favourable on the 13th when the two Dominion squadrons—R.C.A.F. Beaufighters and R.N.Z.A.F. Hampdens—again took off in search of enemy shipping. Once again it was impossible to keep formation in the mist, rain and solid overcast of cloud, and only one of the Beaus, flown by F/O J. D. Hart, was able to cover the Hampdens as they made an attack at close range on four merchant vessels. While the N.Z. pilots were releasing their torpedoes, Hart engaged the two escort ships and saw his bursts hit on their superstructure.

Another Beaufighter, piloted by Bell, now a F/O, with F/O W. R. White as his observer, encountered a Ju. 88 during this sortie and engaged in a running fight. Bell, firing a continuous burst from cannons and machine-guns as he closed in from 500 to 300 yards, saw his fire take effect and draw smoke from both of the enemy's engines. But the rear gunner in the Junkers had also got his sights on his target, hitting the windscreen, engines and hydraulic tank of the Beaufighter. Returning to base Bell executed a skilful landing with his damaged aircraft.

On the following day, May 14th, the Canadian and New Zealand airmen, once again scouring the seas along the Norse coast, found a merchant vessel flying a barrage balloon and escorted by two flak ships. Over the enemy convoy McCutcheon and Moore saw a Blohm and Voss flying-

boat (Ha. 138) which they attacked with cannon and machine-gun fire. Two of its three engines burst into flames and some moments later another Beaufighter sighted the wreckage of an aircraft burning in the water. While engaged in this combat, however, McCutcheon's machine had been hit by flak from the escort ships, which set the port engine nacelle on fire and damaged the undercarriage. Two FW. 190s then approached, but when the Beaufighter pilot turned to meet their attack the enemy fighters flew away. The flames in the engine nacelle were eventually extinguished and McCutcheon returned to base where, unable to lower his undercarriage, he made a skilful belly landing, completing "a splendid bit of airmanship". This gallant action, following upon his feat a few days earlier, was one of the deeds for which McCutcheon was awarded the D.F.C. in July, just after he had been promoted to S/L. During a long and distinguished operational career "his brilliant leadership, devotion to duty and personal example" were a "source of inspiration to all ranks".

These repeated strikes by forces of Hampdens and Beaufighters apparently made the enemy much more chary of sending his shipping along the Norwegian coast in daylight and as a result the roving patrols carried out by the two squadrons in June sighted no shipping to attack. Nor did the reconnaissance planes which scouted up and down the mountainous shoreline have better luck. Once, late in June, F/O W. Wilkie and P/O W. L. Evans, after losing the other members of their formation in an area of low cloud and limited visibility, turned south along the coast from Storholm Light. Sighting an Arado 196 the Beaufighter crew turned to intercept it and were led by the enemy float-plane to a convoy composed of a 12,000-ton merchant ship escorted by three flak ships. These vessels at once opened heavy fire on the R.C.A.F. plane while the Arado remained over the centre of the convoy sheltering within its protecting curtain of flak. Wilkie made several attempts to ap-

proach within range of the enemy machine by using cloud cover, but, these efforts failing, he was forced to return.

In addition to the reconnaissance and shipping strikes, the R.C.A.F. Beaufighters were also engaged during these months on numerous convoy escorts, protecting our own ships against attacks similar to those which the Beaufighters themselves made against the German merchantmen. Only one brief action occurred. On June 4th, F/Os W. D. Thomsett and R. W. Webster were looking for their convoy when they caught sight of a Ju. 88. Climbing above the enemy the Beaufighter crew turned and dived, firing bursts from both cannons and machine-guns as they closed the range from 700 to 500 yards. The Hun appeared to be badly hit as both engines began to smoke heavily, but it took cover in the clouds before any further results could be observed. Its return fire caused only slight damage to the Beaufighter. Thomsett circled below the cloud layer for half an hour but the Junkers did not reappear.

In the spring of 1943 many of the older members of the squadron were posted away on completing their tour of operations. Among those selected for instructors' duties were Schoales and Bell, who had been with the squadron since its earliest days and had repeatedly distinguished themselves in action, piloting Blenheims and Beaufighters on long patrols over the sea. Among the new personnel posted to the unit was S/L A. K. Gatward, D.F.C., who had made a name for himself by dropping a tricolour over the *Arc de Triomphe* while on a low-level flight across the French capital.

July 1943 was marked by another series of strikes against enemy shipping in Norwegian fiords, during which the R.C.A.F. Beaufighters carried out their usual role of fighter escort and anti-flak protection. Repeatedly the formations of Beaufighters flew along the Norwegian coast in brilliant sunshine, defying the Nazi coastal defences, challenging the Luftwaffe to come up and fight. At one time

our aircraft normally made use of cloud cover to reconnoitre for enemy convoys creeping close along the rocky shoreline, but in July they carried out their missions without benefit of any such protecting cover. On one occasion the leader of a group of Beaufighters and Mosquitos took his formation up a fiord which proved to be a dead-end. Some confusion naturally resulted when the pilots had to make an abrupt about-turn, but they quickly reformed and completed their reconnaissance. It is significant, too, that whereas in April and May our Beaufighters had encounters with enemy FW. 190s, the chief opposition in July was offered by large Blohm and Voss flying-boats and only once were fighters, two Me. 109s, seen.

On three successive weekends the R.C.A.F. Beaufighters, in company with Beaus of another squadron, carried out successful strikes. On July 4th, they set out for Kristiansund. Heavy rain was falling and visibility was bad at the time of take-off, but the weather cleared as the formation approached the Norwegian coast near Aalesund, and under a clear sky the Beaufighters flew inland up the coast to their objective. Coastal batteries and convoys along the route opened heavy fire at our aircraft as they flew past, but the pilots located their targets and while the R.C.A.F. Beaufighters circled the fiord, drawing the enemy's fire, the others flew in, and scored good hits on the ships, one of which was left burning. Despite the strong defences of the area the Beaufighters remained over the Norwegian coast for 45 minutes, taking photographs, some of which showed the inhabitants waving to our pilots. As the formation withdrew, two Me. 109s appeared in pursuit. One of the R.C.A.F. Beaufighters, flown by F/O J. R. Rumbel and FS G. M. Lalonde, dropped back to cover another Beau which was being hard pressed and was not seen again.

A week later, on the 10th, after making landfall on the Norwegian coast near Bergen, the pilots turned north along the line of fiords until they found an armed merchant vessel

which they attacked with success. When last seen the enemy ship was smoking heavily and listing. One of our Beaufighters was slightly damaged by the enemy's barrage, while one of the other squadron's machines did not return. On the 17th, off the same section of the Norwegian coast, the Beaufighters found a 3,000-ton merchant vessel protected by small flak ships. Ken Gatward, leader of the R.C.A.F. formation, fired 200 rounds at the larger vessel on which he observed many hits and once again the enemy vessel was left blazing. P/O A. McDonald, flying Beaufighter *N for Norman*, turned his machine-guns on the smaller flak ships, but flew into heavy defensive fire which wounded him in the right arm and leg and shot away many of his instruments. On his return to base McDonald made a skilful belly landing with his damaged aircraft.

Enemy flak fire was not the only danger which our aircrews faced. F/O I. Johnsson, while out on patrol, struck a seagull which broke the perspex in his windshield and caused slight cuts on the pilot's face.

Twice, while the Beaufighters were engaged on defensive patrols over our own convoys, enemy aircraft were sighted but fled before they could be engaged. On July 28th, however, it was different, when six of the R.C.A.F. Beaus, flying in pairs, were engaged in escorting two important naval convoys. In the morning S/L Al de la Haye with FS C. A. Smith as navigator and F/O S. S. Shulemson with Sgt. A. D. Glasgow as navigator were on patrol. A Ju. 88 was sighted first and chased into the clouds. Then a Blohm and Voss 138 was seen. De la Haye made a head-on attack, hitting one of the flying-boat's engines, after which Shulemson attacked from the rear and set the enemy on fire. It glided in flames into the sea and nosed over; one survivor scrambled on to the fuselage and began firing distress signals. The naval vessels then directed our Beaufighters to a second 138 flying-boat. After a stern attack by Al de la Haye, the starboard engine, wing and hull

caught fire and the enemy aircraft dived straight into the sea. No survivors were seen and only small pieces of wreckage remained on the surface.

The early afternoon patrol passed without further action, but late in the afternoon when F/O E. J. Keefe and his navigator, Sgt. B. G. Steed, were guarding the convoys the Luftwaffe made another attempt to attack with two more Blohm and Voss 138s. Three times the Beaufighter pilot fired on them from the rear, seeing numerous strikes on one and setting the port engine and hull, of the second on fire. Keefe's port engine was put out of action, however, by the enemy's return fire and he had to return to base without seeing the final result of his combats. For the R.C.A.F. squadron it had been a very successful day: two BV. 138s had certainly been destroyed, and a third probably destroyed. Our only casualty was Keefe's Beaufighter, which crash-landed and was written off.

Flying-Boats

While this land-based squadron was escorting convoys and doing reconnaissances from one northern base, another R.C.A.F. Coastal Command squadron for some months carried on similar work in Catalina flying-boats from another base a few miles away. Like the Blenheims, the Cats escorted convoys and warships, searched for missing vessels and aircraft, did anti-submarine patrols and sweeps, carried out special reconnaissances or flew routine sentry patrols over the great stretches of the northern ocean. The average flight of a Catalina, with its crew of eight to ten men, on one of these missions was about ten hours, but patrols of twelve or fourteen hours were not unusual, and on one occasion a machine was airborne for 21 hours and on another for over 23. During all but a fraction of the time on these flights the aircraft were out of sight of land and utterly dependent upon the skill of the navigator and the occasional fixes the wireless operator was able to get to bring them

home. And most of these long flights were uneventful, unless one could call abominable weather an event. Report after report states simply after a flight of many hours that at such and such a time the convoy was located in position X, escorted for so many hours and left in position Y, when the relieving aircraft arrived. In other words, D.C.O.

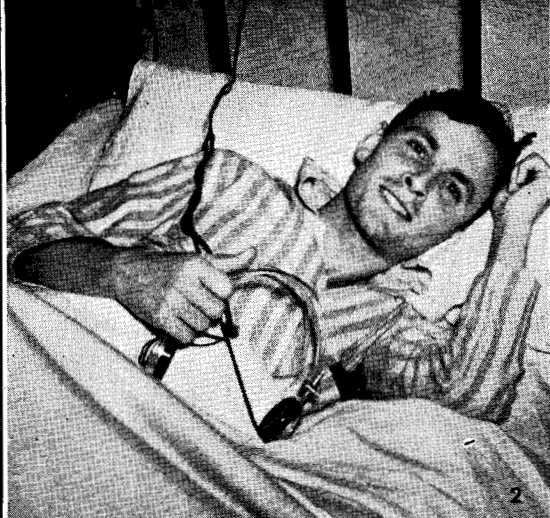
This Catalina squadron moved from the northern zone early in the spring of 1942 to another war area off the coast of India and their exploits in that zone will be discussed in a later chapter.

CHAPTER XIV

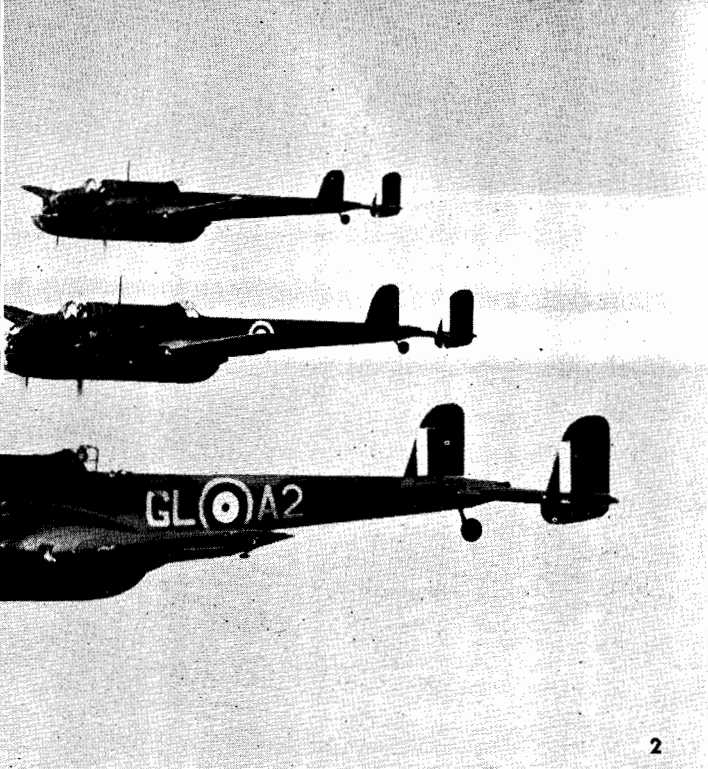
THE NETHERLANDS COASTAL WATERS

ONE R.C.A.F. unit, the Demon squadron, was outstandingly successful in the second major activity of Coastal Command, the campaign against enemy shipping. Time after time, the Demons established records—and then broke them—for enemy tonnage attacked and damaged or destroyed. The squadron was led first by W/C H. M. Styles, R.A.F., who was followed by W/C A. C. Brown, D.F.C. In three months of operational activity the Demons attacked and damaged a record total of 150,000 tons of Nazi shipping. In May 1942 they set another record of 83,000 tons in one month. Skimming over the sea at zero feet, flying through curtains of light and heavy flak and releasing their bombs at mast height, they wrought untold destruction on scores of enemy convoys picking their way through the minefields—so thoughtfully sown by the R.A.F. and the R.C.A.F.—off the Frisian Islands. The Demons, with their fellow squadrons of Coastal Command, compelled the Nazis to protect their harassed merchant shipping by diverting more and more ships and men to flak ship duties and bringing fighter aircraft from the Russian front. All of which adds up to a sharp decrease in the volume of shipping which could be moved along the coastal route to Rotterdam.

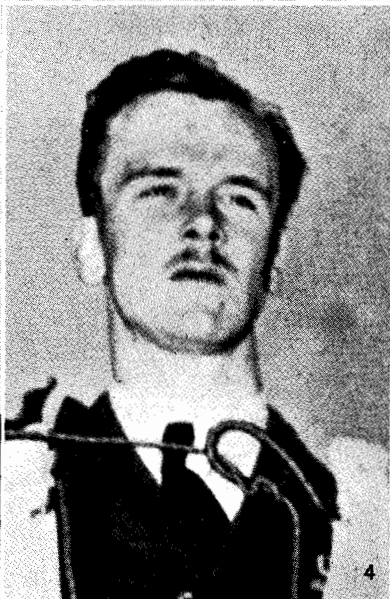
The squadron's colourful exploits would fill one vol-



1. F/L F. A. Kay, D.F.C. 2. F/O E. F. Paige, D.F.C. 3. The Intelligence Officer questions the crew of a heavy bomber at the de-briefing on the return from a raid over Germany.



2



1. A Hipper-class cruiser in dry-dock in Brest, France. 2. Flight of Herefords.
3. P/O R. G. Mullen, D.F.M. 4. P/O Mark Roach, D.F.M. 5. FS T. B. Miller, G.M.

ume—and most probably will at some later date—but a few have been selected from the record book to illustrate its work. That the squadron was flying the Lockheed Hudson, which for years past had given such good service on commercial airlines but was not originally designed for war, makes the feats all the more astounding.

On November 1st, 1941, a roving Demon sighted a convoy off Terschelling and, after reporting its location to the home station, went in to attack and saw one bomb make a direct hit at the foot of the mast of a 4,000-ton ship. Meanwhile, eight more Hudsons had taken off to join in the attack. All but one found the convoy and bombed from mast height in the face of intense flak which damaged three of the aircraft. Direct hits were observed on five ships—a 7,000-ton tanker and merchant vessels of 6,000, 5,000, 3,500 and 3,000 tons. In one attack over 28,000 tons of Axis shipping had been damaged.

On the following night the Demons repeated their exploit at the expense of two other Nazi convoys, when Sgt. J. W. Creeden saw two of his bombs score direct hits as he skimmed past the mast-tips of a 6,000-ton merchant vessel. There was a terrific explosion and the whole ship blew up. Creeden was subsequently commissioned for his outstanding work on this and many other occasions, but unfortunately was killed about four months later. Styles made two direct hits and a near miss on a 7,000-ton tanker, which gave off dense clouds of oily black smoke tinged with a red glow. Three other pilots reported direct hits or near misses on their target ships. It should be noted here that frequently a near miss is as effective as a direct hit, since the concussion springs the plates of the vessel; its chances of making port are reduced, and even if it does arrive it must go into drydock for some time to effect repairs.

Styles, Lewis and Mullen Are Decorated

Styles was awarded the D.S.O. in recognition of his

“magnificent example of courageous leadership and determination”, which had raised his squadron to such a “high standard of operational efficiency”, while two of the most outstanding Demons, S/L P. E. Lewis and Sgt. R. G. Mullen, received the D.F.C. and D.F.M. respectively. Both had been most successful in attacking enemy shipping throughout their tour of operations. The Air Council especially commended the squadron as a whole for its outstanding work during the last four months of 1941, and Air Chief Marshal Sir Philip Joubert and the Group Commander added their congratulations.

On January 7th, 1942, Styles handed over the squadron to W/C A. C. Brown, a Canadian from Winnipeg who had joined the R.A.F. in 1934. In the early part of the war, Brown had carried out many important reconnaissance and bombing missions and won the D.F.C. Under his inspired leadership the Demons continued their record of successes and in May 1942, despite a marked increase in the strength and variety of enemy defences, reached a new peak of achievement. Three of the Demons’ encounters during that month were worthy of their almost legendary reputation. Just before dawn on the 5th, Brown and another pilot reconnoitring for enemy shipping off the Dutch coast found a convoy of twelve vessels and, after signalling the strike to their base, attacked through a dense curtain of flak. The winco dive-bombed one ship and felt his aircraft shudder from the explosions, but was unable to note the results owing to the evasive action necessary to escape the enemy’s anti-aircraft fire. The pilot of the other Hudson scored near misses. More Hudsons arrived in answer to Brown’s signal and, despite the flak, made doubly effective by the increasing morning light, closed in and attacked. P/O E. F. Paige¹, one of the newly-arrived pilots, was severely wounded as

¹ Paige’s brother, B. C. Paige, who as a sergeant observer in another squadron won the D.F.M., also served with the Demons during this period.

he closed in and his instrument panel was smashed by a shell fragment, but despite intense pain he brought his machine and crew safely home. Frankie Paige's fortitude and devotion to duty were recognized by the award of the D.F.C.

F/L R. M. Christie, attacking just after Paige, saw two of his bombs drop squarely on and set fire to a vessel of between five and six thousand tons. Christie's Hudson was hit by flak and the starboard engine caught fire and packed up, which, to the earth-bound, means stopped running. With a single engine, Christie limped home in his damaged machine.

Two days later an even more hair-raising exploit was recorded by the trouble-loving Demons, when a patrol of twelve Hudsons caught a large convoy unawares—but the story is best told by a transcript from the squadron record:

At long last, with the Squadron on the mark and 22 aircraft serviceable, the Squadron Commander made arrangements to see what we could do. Two Beaufighters from X Squadron were instructed to carry out a reconnaissance along the Dutch coast and to report back here immediately any enemy shipping that was discovered. They did so, and within 30 minutes of their landing, the Squadron took off in formation led by W/C A. C. Brown, D.F.C., proceeding to datum off Terschelling.

At last light the enemy convoy of 12 fairly large ships was sighted. Without more ado, the Squadron Commander led the squadron down the line, and as he turned in, the rest followed suit and almost simultaneously the 22 aircraft picked out their ships and dropped their bombs. Seven definite ships were successfully bombed, and one possible. A number of our aircraft were damaged, but all returned safely to base with no casualties.

Christie and Kay Are Decorated

Again on the 15th of the month Christie, leading two formations of the Demons accompanied by another group of Hudsons of the Royal Dutch Naval Air Service, ran into a convoy of ten ships accompanied by a strong escort. P/O F. A. Kay was the first to make contact and as he flew in to

attack from mast height his aircraft was repeatedly hit and severely damaged. Despite the fact that Kay was wounded in the hand, he completed his run and released his bombs. The Hudson was again hit, this time in both engines-and the pilot received another wound in the arm. Regardless of his injuries and the damage to his aircraft, Kay was able to nurse his machine along until he reached the English Coast, before his engines failed completely.

The pilots' persistence in the face of such damaging fire had thoroughly infuriated the Nazis and, by the time Christie's formation were ready for their run, they were peppered with even more intense fire which riddled the leader's aircraft, put the instruments and hydraulic system out of action and wounded the observer. But Christie's bombs reached their mark and caused a terrific explosion and fire on the stern of a medium-sized ship. Four of the Hudsons were shot down in this engagement, but one of these was seen to bomb an enemy ship before crashing into the sea; a second made a direct hit on its target before being shot down in flames while a third crashed in flames on the deck of one of the enemy vessels. Our losses were heavy, but three merchant vessels had been hit and left burning, two more received direct hits and a sixth was damaged by near misses. The two leaders of the Demon formation were decorated for their gallantry in this action, Christie receiving the D.S.O. and Kay the D.F.C.

These were not the only dust-ups the Demons had with the enemy during the month, for almost every day they were out scouting and many times their hunt was successful. And always their tactics were the same—keep as low as possible and “bomb the Nazi to Hell” regardless of the cost. On the 29th, P/O L. J. O'Connell, who later won the D.F.C., swept in so close to his prey that one of his bomb doors was torn off by the ship's mast.

In June, a brilliant exploit occurred which stands above all the others when, just after midnight on the 14th, S/L W.

B. Cooper sighted three enemy ships off Den Helder and attacked them in turn. He missed the first, scored a direct hit on and sank the second and then proceeded to mete out the same punishment to the third. Then, with all his bombs gone, he turned back and machine-gunned the first vessel. During the summer months the Demons kept up the good work and again won official commendation for their efforts. On one of these strikes, which was carried out on a very dark night, they combed the sea unsuccessfully but could find no trace of the convoy they were sure was in the offing, until FS H. G. Collins, at the helm of one of the aircraft, unknowingly passed directly over one of the enemy ships. The Huns, thinking an attack was starting, opened fire with everything they had, and thereby disclosed the position of the convoy. Then the fun started! Our aircraft closed in, dropped flares and in the blaze of illumination made their bombing runs. The winco, leading the show as he did on so many occasions, set one ship on fire; a second pilot hit another and a third ship received a direct hit on the stern. Despite the intense flak and the constant attention given by Nazi night fighters, all the Hudsons returned safely.

The Demons Go To Bremen

As a variation from their normal duties the Demons greeted with joy the news that they were to participate in the 1,000-bomber raid on Bremen. A member of one crew remarked that a navigator was hardly necessary on the outward journey, as all the pilot had to do was steer by the flak bursts directed at the machine ahead of him. Over the target there was a thick cloud, on which could be seen the reflection of huge fires but which interfered with the crews' seeing the effect of their eggs. In contrast to their usual tactics of coming down to mast height before dropping their load, all but one of the Demons bombed through the clouds from 12,000 feet. However, one aircraft found a hole in the

clouds and got down to 7,000 feet before letting its stick go, and the crew could see explosions and a fire on the docks as a result of their efforts.

The Demons also joined in the running attack on the *Scharnhorst*, *Gneisenau* and *Prinz Eugen* along the English Channel in February 1942. Five Hudsons, led by S/L W. A. Anderson and F/O L. Cowperthwaite, located the fleeing men-o'-war through the clouds and bombed them from heights varying from 1,500 to 400 feet. Both of the leading aircraft were shot down. Creeden dived through the clouds amid an extremely heavy barrage of anti-aircraft fire and released his bombs on one of the escorting destroyers. While climbing back into the clouds his machine was attacked by a Ju. 88 but the accurate shooting of his gunners, Sgts. G. Hancox and H. G. Everett, forced the Hun to break off. All three members of the crew were decorated with the D.F.M. Cowperthwaite and his observer, F/O J. E. Lister, whose aircraft was one of those that failed to return, were both mentioned in despatches for their services. It might be wondered why they were not awarded the D.F.C., but regulations provide that while this decoration may be granted posthumously, recommendation must have been submitted before the casualty.

Further Anti-Shipping Strikes off the Occupied Coasts

After August the Demon's activities were less spectacular, as the enemy's shipping became more and more difficult to find and his defences became stronger. Numerous sorties were made in September, but few crews were able to discover targets for their bombs. Sgt. R. C. Dalgleish and his crew, searching for an enemy tanker on the 4th, located their target between Calais and Dunkirk and prepared to attack it. Before the bombs could be released, however, enemy night fighters intervened and drove the Hudson away. A second and a third time Dalgleish returned to the attack, only to be foiled again. Undaunted, he made a fourth run over the target

and this time got his bombs away. They were seen to explode near one of the escort vessels. Three nights later P/O E. L. Howey acted as scout for another formation of Hudsons and found a convoy slipping along the coast off Texel. He dropped flares to illuminate the target and then bombed the ships, but missed. P/O W. B. Anderson, the only one of the follow-up force to locate the enemy, had better luck as he scored at least one near miss on a merchant vessel.

September 9th was the most successful night in the month for the Demons. Early that day a reconnoitring Beaufighter had reported nine merchant vessels escorted by two E-boats off the Frisian Islands, and under cover of darkness a force of Hudsons from the Canadian and Royal, Dutch Naval Air Service squadrons was despatched to strike at the convoy. The scouting craft found the ships north of Schiermonnikoog and dropped flame floats among them. The other Hudsons then flew in to the attack, F/O J. L. Ellam scoring a direct hit on one merchant vessel while three other Demon crews reported near misses.

Flame floats were also used by WO M. A. Tisdale to light up a large convoy which he located off Texel on the 18th when his bombs made a direct hit on a medium-sized vessel in the group. The same evening F/O C. W. Taylor, unable to locate the convoy, attacked as an alternative the harbour at Den Helder, causing a tremendous explosion which shook his aircraft. The fire which followed was still visible when Taylor's crew were 30 miles away.

Another special bombing mission had been assigned to the Demons a few nights previously, when they were detailed to bomb the docks at Cherbourg. Few results of their attack could be observed, but it was believed that some damage was caused in the target area. The Germans admitted that buildings near the docks had been hit.

On September 21st Brown said goodbye to the squadron which he had led with such distinction for almost nine months. The "outstanding leadership and devotion to duty"

which he had displayed during that period were later recognized by the award of the Distinguished Service. Order and a mention in despatches. "By his personal tact and example" (the citation stated) Alan Brown had "been largely responsible for the sound morale and efficiency of his squadron". Personally leading the Demons on all their major raids, he had obtained hits on five enemy merchant vessels. "His calm demeanour under all circumstances, his organizing ability, and determination to press home his attacks" had set a magnificent example.

A few days after Brown's departure the Demon squadron left the base where they had spent so many fruitful months, and moved to a new station in southwest England. Their days as a striking squadron in Coastal Command were temporarily over; a new role now awaited them.

Some weeks later the squadron returned to East Anglia, but did not resume operations there until the end of the year. Many of their aircraft had been transferred to other units, replacements were slow in coming through because of a temporary shortage resulting from diversions to the Mediterranean and other theatres and, for a time, the future of the squadron was obscure. For the Demons, looking back to the great days of the past, this was a depressing period. The aircraft remaining in their possession were now battle-worn and obsolescent (ropey is the service term); no one appeared to know when or how the squadron would be re-equipped or where employed. The prospect of a move overseas offered some encouragement, but even this was cancelled at the last moment.

It was a relief to the squadron, therefore, when late in December 1942 they were able to resume work, carrying out antishipping patrols once more over the narrow waters of the North Sea. There was much bad weather during the month, seriously hampering operations; most of the crews who did succeed in making sorties returned with reports of "nothing sighted".

But three moderately successful strikes were carried out in January, before the Demons parted with the last of their Hudsons. On the 13th, W/C J. C. Archer, their new commander, led three of his crews in an attack on a merchant vessel of 3,000-4,000 tons lying off Den Helder. His bombs scored a direct hit on the target, followed by an explosion in the ship. A second Hudson, piloted by S/L D. D. Weightman, made a near miss on the same vessel. Archer's success, his first since taking over the command two months previously, did much to raise morale in his unit. Five nights later, he again set the example for his crews by scoring near misses on another convoy off the Dutch coast. FS J. E. G. Girouard and crew also reported a successful attack. The third anti-shipping strike on the 26th met very accurate flak fire from the escort vessels and a heavy mist over the sea made it difficult to observe results, but one of the three crews again claimed a near miss.

Two aircraft and crews were lost during these operations in late December 1942 and January 1943. One of the missing Hudsons was seen to drop flares and flame floats round a convoy but it did not return and an extensive search next day found no trace. Yet another crew had a very narrow escape when their Hudson fouled the cable of a balloon swaying above a convoy. The heavy wire cut through the wing as far as the main spar before the aircraft broke free. Undeterred by this mishap the pilot completed his mission.

In the last days of January a new chapter in the history of the Demons opened. Conversion training began on Wellingtons and the squadron moved north to Scotland for six weeks to complete training and resume operations with the different type of aircraft. Thence it moved in April to southwest England, to join in Coastal Command's Battle of the Bay.

The Torpedo-Bombers

The Demons' place in the campaign against enemy

coastal shipping was taken over now by another R.C.A.F. squadron equipped with Hampden torpedo-bombers. Early in November this squadron, led by W/C W. W. Bean, had moved to a station in southwest England, whence its aircraft went out to attack enemy convoys between Cherbourg and Brest and along the Dutch coast. For some weeks their patrols were fruitless as no enemy ships could be found. Finally, late in December, a convoy was intercepted and attacked.

Three Hampdens took off that night, December 22nd, to make a strike off the Dutch coast. Bean searched the area in vain, but Sgts. G. O. Ellergodt and J. C. Donald and their crews saw flares and flak bursting below them and then discerned the vague outlines of several ships. Intense anti-aircraft fire greeted the two pilots as they flew in to release their torpedoes and both aircraft were hit. Three shells exploded inside the fuselage of Ellergodt's Hampden, putting practically all the instruments out of commission and damaging the controls. With difficulty the pilot brought his aircraft under control and flew the crippled kite home. Although neither crew could observe the result of their attacks because of violent evasive action, Bean saw a large flash at that time and the two Hampdens were credited with a possible torpedo hit on the enemy ships.¹

January 1943 was a very quiet period for the squadron, but from February to the latter part of May it was again actively engaged in the hunt for German convoys.

Of the five anti-shipping strikes which the Hampdens made during February, only one found a target. Two pilots launched their torpedoes at the merchant vessels in the face of intense flak fire, which made it impossible to observe results, but a 4,000-ton ship was later seen to be well on fire. F/O A. B. Brenner's Hampden was repeatedly hit despite the pilot's violent evasive action, one heavily armed ship in particular directing very concentrated fire at it.

¹ Sgt. Ellergodt was mentioned in despatches in June 1943.

Rudders, fins and elevators were riddled; both wing tips were damaged; the fuselage was holed in many places and the perspex smashed; many of the instruments were put out of commission, the port engine took fire and stopped while the starboard motor began to run erratically. For a few moments the Hampden struggled on and then the pilot had to ditch in the sea. In eight seconds the aircraft sank. Brenner and his crew, FS E. L. L. Rowe and Sgts. A. Glass and E. A. Vautier, scrambled into their dinghy—and waited. It was then almost 11 o'clock on the night of February 18th.

As soon as Hampden "O" was reported overdue, the search began. One day passed; no dinghy was seen. On the 20th the search continued. That afternoon a Walrus amphibian (F/Os L. J. Brown and D. Sheppard and FS W. Rance) from one of the air-sea rescue squadrons was detailed to sweep an area fifty miles east of Orfordness. They searched thoroughly and were about to return to base when ten miles north of their area they chanced to see a dinghy. Within a few minutes the Walrus had landed alongside and the four men of the missing Hampden crew were pulled on board. The clock on the instrument panel of the Walrus pointed to 1750. For 43 hours Brenner and his comrades had been afloat on the North Sea. And their adventures had not yet ended. The area into which their dinghy had drifted was used for practice firing and a motorboat which came up warned the Walrus of the danger. Fortunately the sea was calm and after a fairly long run Brown got his heavily loaded aircraft into the air. Another difficulty then arose; the petrol supply was running low, while a belt of heavy mist over the air base made a dusk landing hazardous. By dint of skilled flying the pilot brought the amphibian straight into the airfield and landed safely. An ambulance was waiting on the tarmac to rush the four rescued men to hospital for examination and treatment. They were in fairly good shape despite their ordeal and within a few days had reported back to their squadron.

Another Hampden was lost during a patrol off the Dutch coast in March. One of the crews engaged on this operation found a convoy of seven or eight small ships, but lost it again in the darkness before an attack could be made. Later, while hunting for the vessels, the same crew saw flak being fired and something, possibly an aircraft, burning on the water near one of the flak ships.

A torpedo strike off the Dutch coast on April 14th was more successful. One Hampden crew picked up two convoys, but in neither case was the light sufficient to permit an attack. The second Hampden piloted by F/O P. N. Harris, however, found yet another convoy of six merchant vessels and attacked the third vessel in the line, a ship of about 6,000 tons. The torpedo was seen to run true towards the target and as the Hampden broke away the gunners saw thick black smoke gush from the vessel. Claim was made for one M.V. hit and damaged. Half an hour later a third aircraft flown by P/O K. C. Wathen located the same convoy and in the poor visibility then prevailing had to make four runs before the torpedo could be dropped. Once again dense smoke was seen to pour from the target vessel, and another damaged claim was entered.

Six Hampdens again searched the shipping routes along the Dutch coast on the night of the 19th. Five found nothing, but the sixth crew discovered a convoy of four merchant ships accompanied by five escort vessels and launched its torpedo at the rear ship of 2,000-3,000 tons on the port side of the formation. The crew watched their tin fish running true on its track for 100 yards before flak fire forced the pilot to take evasive action and no further results could be observed.

In May, anti-shipping patrols carried out on five nights resulted in three attacks on enemy convoys, with two definite torpedo hits and a possible claimed by the aircrews participating. Two Hampdens and their crews were lost.

Three successive patrols on May 13th, 14th and 15th

could find no targets but did produce one incident. WO H. W. Peel came under heavy machine-gun and cannon fire as he flew across two E-boats and a mine-sweeper. One shell exploded inside the observer's cockpit, destroying several instruments and gauges, and forcing the pilot to return with his battered Hampden.

This sequence of fruitless searches ended with a successful strike. On the night of the 17th, when enemy shipping was reported off Borkum, the R.C.A.F. squadron despatched eight crews to attack. Six of the eight located their target, two large convoys of twelve ships each, sailing in a staggered formation. F/L W. H. Adams dropped his torpedo at one ship, but once again evasive action made it impossible to observe exact results, although the crew was confident that the vessel was well and truly hit.

Enemy flak hit the Hampden causing some damage. As Adams flew homeward he saw another aircraft attack the second convoy, one vessel of which was smoking heavily and appeared to be in difficulties. This was the third successful attack Adams had made on enemy convoys and in July he received the Distinguished Flying Cross.

Harris, on Hampden "M", also won the D.F.C. that night, when he attacked and saw a great amount of smoke or steam rise from his target. Like the first Hampden, Harris' kite too encountered intense flak from the convoy. A third attack was carried out by "H", captained by Sgt. W. G. Pilkington, but once again definite results could not be observed because of evasive action although a possible hit was claimed. Accurate fire from the merchant vessels and their escort hit Pilkington's Hampden in several places, slightly wounding the rear gunner. A fourth crew, although unable themselves to make a successful attack, reported seeing two medium-sized merchant vessels sinking with their decks awash and smoking heavily and several life-boats in the vicinity. This report would appear to substantiate the claim that at least two of the three torpedoes re-

leased by the R.C.A.F. Hampdens reached their mark. Unfortunately two aircraft and their crews did not return. Harris saw one machine sinking in the target area.

A week later, on May 23rd, two Hampden crews, while roving off the Dutch coast, sighted another convoy. One of the two lost the ships before an attack could be made, but Sgt. W. R. R. Savage launched his torpedo at the leading vessel, a "three-island" type ship of 4,000 or 5,000 tons. Once again, as was usually the case in these brief night encounters, violent barrage fire from the convoy forced the pilot to take sharp avoiding action before results of the attack could be observed.

Anti-shipping patrols along the Dutch and north French coasts in June found no enemy shipping other than trawlers, which were attacked with bombs.

During the period September 1942 to June 1943, the R.C.A.F.

Hampden squadron also had detachments operating from another base in England and from Scotland, sharing in other phases of Coastal Command's operations against the enemy.

During July W/C G. H. D. Evans (successor to Bean) led the squadron chiefly on anti-submarine patrols over the Bay of Biscay, but on a few occasions his Hampdens roamed along the Channel and North Sea coasts in search of enemy shipping. One such roving patrol in the early hours of July 14th found no target to attack, nor did a second patrol three nights later, although one of the Hampdens, captained by FS R. Walter, failed to return. Another aircraft picked up an S.O.S. signal which may have been sent by the missing Hampden "F". Later in the month (July 26th) six Hampdens, after searching in vain for enemy ships, turned inland and dropped their bombs on a target on the French coast. One of the machines (FS R. Grainger) was lost that night.

More anti-shipping patrols were carried out during Au-

gust by the R.C.A.F. Hampdens, now led by W/C C. G. Ruttan. Only once, however, was a target located. On the night of the 11th and again the following night they searched the waterways along the French and Dutch coasts in vain. A third patrol on the night of the 14th located a small convoy of one 2,000-ton merchant vessel accompanied by three escort ships. FS R. H. Watt attacked the merchant vessel with unobserved results except some light return fire. The next night, the 15th, P. N. Harris, now a S/L, wearer of the D.F.C. and one of the outstanding captains of the squadron, failed to return from another sortie in search of enemy shipping. A second loss was suffered three nights later, on the 18th, when FS W. A. Robson and his crew went missing while on a patrol off the Dutch coast.

This R.C.A.F. torpedo-bomber squadron had been party to an incident a year earlier which deserves preservation in the annals of air and sea. When an aircraft failed to return from a patrol off the Frisian Islands on one occasion, searching aircraft from the squadron found oil streaks, wreckage of the plane and a body floating in the water. In view of this evidence all four of the crew were given up for dead, but two weeks later, on June 18th, 1942, a naval gunboat found a dinghy drifting off the Dutch coast and in it P/O F. H. Mahn still alive after drifting for fourteen days. One of his crew had been killed in the crash, but the others had managed to inflate and climb into the dinghy, to drift at the will of wind and wave. Seven days saw the end of their emergency rations, and, exhausted by exposure and starvation, the other two crew members died. The pilot drifted on for a further week with only some rain water and a gull, which he caught and ate raw, for nourishment, before he was rescued.

CHAPTER XV

THE BATTLE OF THE ATLANTIC

COASTAL COMMAND'S long contest with the German U-boat packs preying on our Atlantic convoys was in progress many months before R.C.A.F. units were ready to participate in it from the eastern side of the Atlantic. From the earliest days of the war, home-based reconnaissance squadrons of the R.C.A.F. had patrolled over the approaches to Halifax and the Gulf of St. Lawrence, steadily extending their sweeps and escorts farther and farther eastward as better, longer-range aircraft became available. But it was not until August 1942 that flyingboats from R.C.A.F. units based in the United Kingdom began winging their way westward across the ocean to meet the convoys which their comrades at home had escorted on the first stage of their trans-Atlantic voyage.

In July 1941 a Catalina flying-boat squadron had been organized in the R.C.A.F. Overseas, and in October of that year had started operations from a base in the Shetlands. Five months later, when the situation in the Far East had become desperately critical, the Catalinas were flown out to Ceylon where they have since performed valuable service.

After the departure of this squadron, two new units were formed in the spring of 1942, one equipped with Catalinas and the other with Sunderlands. Later in the year the first of these was re-equipped with the huge four-

engined flying-boats, so that both squadrons now fly the same type.

W/C L. W. Skey, D.F.C., the commander of the Cat squadron, is a Canadian officer of long and distinguished service and one of the most experienced flying-boat captains in Coastal Command. Joining the R.A.F. in pre-Munich days, Larry Skey was a flight lieutenant at Alexandria when the war began. He flew his Sunderland home to Britain on a few hours' notice and on September 15th, 1939, while escorting a convoy, sighted an enemy U-boat, being the first pilot in his squadron to make contact with the enemy. A few days later, when a merchant vessel was torpedoed south-west of Ireland, Skey flew to its assistance and attracted help for the survivors. In November 1939 he took part in the search for the German pocket-battleship *Deutschland*, a long patrol which, carried out in the face of extremely adverse weather conditions, won for him the third Distinguished Flying Cross awarded to a Canadian in this war. His flying-boat was one of those which escorted the first Canadian Army convoy in December 1939.

After the Nazi assault upon Norway had started, Skey was instructed to fly Maj.-Gen. Carton de Wart to Namsos Fiord to confer with other officers on board a British destroyer. The rendezvous was made but almost immediately four Ju. 88s and two He. IIIs, coming in over the fiord, made a bombing attack on the destroyer, machine-gunned the Sunderland flying-boat and injured one of the passengers. When the hour-long attack had ended, Larry took off and flew back to Scotland. For these and other services he was mentioned in despatches in January 1941.

By the end of August 1942 three of Skey's Catalina crews were trained and ready for operations and were immediately detached to the north to ferry key personnel, equipment and spares to northern Russia. In transit they patrolled the route of important Russian convoys, on the

watch for submarines or surface raiders which might venture out from Norwegian fiords. One flying-boat, captained by WO L. W. C. Limpert, made several transit flights and escort patrols before rejoining the unit. Once Limpert found an air raid in progress as he reached his Russian base and bombs dropped all around the Catalina as the pilot made his approach.

After this brief period of Russian operations, Skey's squadron handed over its Catalinas to another unit and eleven crews departed for Canada to ferry more Cats to Britain. After their return, training on Sunderlands began and continued through the winter. Progress was greatly retarded by frequent spells of bad weather high winds rising to gale strength, rainstorms and low ceilings but by the end of February 1943 the squadron was ready for action.

Meanwhile the second Sunderland squadron, commanded by W/C F. J. Rump, R.A.F., had been on operations for several months. Organized at a base in western Scotland, the squadron began work with a few crews early in August, escorting convoys through the western approaches and searching the seas for enemy U-boats. Late in October the Sunderlands moved to a base in Northern Ireland, where they have since remained.

Through the winter months, November 1942 to February 1943, Rump's Sunderlands made more than 120 patrols over the North Atlantic, averaging 12 to 15 hours to a sortie, the great majority of which were routine operational patrols, devoid of incident. A captain's report, typical of most anti-submarine escorts, runs as follows

We took off at 0205; set course from at 0256 for convoy which was met at 0640 on course 055°T/8 knots. Composition 8 escort vessels, 23 merchant vessels. Set course on patrol at 0645 on S.N.O.'s instructions; carried out patrol. Relief aircraft sighted at 1255; off patrol, set course for base. Weather good but hazy; no cloud; 10 miles visibility. Waterborne base 1658.



BEFORE AND AFTER: Above, Sgt. W. M. Rawbone, P/O R. D. Ward, Sgt. G. J. McKay. Below, members of an R.C.A.F. squadron in the Middle East after operations; at the extreme right, F/O R. M. Brooks.



1. F/O L. G. Coons. 2. Sgt. Bruce D. Croxton, D.F.M. 3. F/O P. J. Oleinek, D.F.C. 4. His Royal Highness the Duke of Gloucester inspects the squadron in Ceylon, commanded by W/C J. L. Plant. 5. An operation is planned; P/O Parr (R.A.F.), F/L B. R. Walker, D.F.C., an R.A.F. squadron commander, F/O W. Lodge (I.O.). 6. Sgt. G. H. Rainville, D.F.M.

But, it should be emphasized, the success of these long patrols over the sea is not to be judged solely on the basis of enemy U-boats sighted and destroyed. Every flying-boat crew in Coastal Command nourishes the ambition to see its depth charges blast a submarine out of the water and many have realized their aim. But those other crews who patiently scour the seas hour after hour, day after day, and week after week, seeing nothing but grey weather-beaten ships and a limitless expanse of ocean—they, too, have served, bringing their charges safely into port and keeping open the vital lifelines linking Britain with the Dominions and the other United Nations.

Uneventful though most of the patrols were, incidents do occasionally crop up in the records of those winter months. Once, in mid-November, a Sunderland caught sight of a distant U-boat which crash-dived before the flying-boat could come within attacking range. Some days later, on November 21st, FS R. S. Long and his crew were on an anti-submarine escort patrol when a Ju. 88 appeared and attacked the Sunderland. Except for four bullet holes through the mainplane the enemy's bursts missed, but the flying-boat's gunners saw their tracers hit the Junkers, which dived to sea level, out of range, and then slowly climbed into cloud cover, obviously damaged. During the engagement the cook calmly continued preparing the crew's lunch, with only an occasional glance out of his galley window to note the course of the action.

During the same period Rump's squadron was also actively engaged in a great search carried out by Coastal Command for survivors of a torpedoed ship. Empty rafts were sighted on several occasions, and day after day the hunt went on until, on the 20th, FS S. H. E. Cook sighted a lifeboat with a dozen people huddled in it. For the next eight hours he circled above the boat, keeping it in sight, until relieving aircraft were on the way. On the following day the Sunderlands were out again to continue the search

when two of the R.C.A.F. crews found another lifeboat with a score or more survivors and watched over it until a ship arrived and picked them up.

With the approach of spring the hunting over the Atlantic Ocean became better and Rump's crews sighted five submarines during March, two more in April and two again in May. Seven of these were attacked and one was apparently destroyed. A second was destroyed by naval vessels following the Sunderland's sighting report, while in other instances there was evidence that some damage at least had been done to the enemy.

The first of the incidents which ended weeks of monotonous patrolling through the winter months occurred on March 19th. F/L C. W. Bradley and his crew were on a sweep covering two convoys when a report was received of a U-boat attack on a ship in the area. Setting course for the position they sighted a periscope and wake ten miles off the port bow. It was too late to make an effective attack but the Sunderland warned a tanker, straggling from the convoy, that danger was lurking near, and then proceeded to stalk the U-boat. Two hours later the crew again sighted their quarry on the surface eight miles ahead. The submarine immediately crash-dived, but the Sunderland, diving across the swirl, released several depth charges. The submarine presumably had been shadowing the tanker and was twice driven off by the timely arrival of the Sunderland.

The next morning two of the squadron's flying-boats again swept the seas around the same convoys. The rear gunner of one kite spotted the conning-tower of a U-boat as it submerged four miles away and the pilot made a steep turn, but the submarine had completely disappeared before the Sunderland could reach an attacking position. A few minutes later F/O A. B. Howell, captain of the second Sunderland, sighted another U-boat fully surfaced, with four men on deck. This time the flying-boat was able to attack

before the submarine had fully submerged and straddled it with depth charges. A large oil slick spread over the area but no other result could be observed.

As he was returning to base four and a half hours later, Howell again sighted a submarine on the surface at a distance of eight miles. The enemy opened fire on the approaching Sunderland and continued to fire until 45 seconds before it submerged. A depth charge was dropped while part of the U-boat's tail was still visible, but no indication of any damage could be seen at the time or when Howell returned to the scene an hour later. These successive attacks, "delivered with great skill and determination", were cited in the award of the Distinguished Flying Cross to Howell.

Early in April there was another flurry of activity, culminating in two more attacks, the first of which appeared to be a definite kill. Bradley and his crew of ten had been patrolling a convoy for seven hours when they sighted a fully surfaced submarine ten miles away. Approaching out of the sun the pilot was able to close the gap to two miles before the enemy caught sight of the flying-boat and crash-dived. It was too late! The whole shape of the U-boat was still clearly visible beneath the water, with the propellers churning the surface, when the Sunderland swept over it at a low height and released several depth charges at close intervals along its track from bow to stern. There were four great explosions which threw "at least a dozen pieces of solid debris" into the air. Then, as the flying-boat circled the spot, the air crew saw objects floating on the water, some of which appeared to be bodies. Forty-five seconds later there was an underwater explosion, "followed one minute later by a violent eruption, and the surface of the sea boiled and frothed". Quantities of oil then rose to the surface, forming a large patch. There seems little doubt that Sunderland *H for Harry* had scored a kill, the first definite success of the R.C.A.F.

overseas units in the Battle of the Atlantic.¹ Bradley's "well-deserved success" brought him an equally well merited Distinguished Flying Cross.

Three days later, on the 8th, F/O A. A. Bishop surprised another submarine on the surface. Low cloud stretched over the sea and occasional showers further reduced visibility so that the Sunderland was almost on top of the U-boat before seeing it. While the flying-boat circled to gain an attacking position the three gunners opened fire on the submarine; then, diving along its track, Bishop released his depth charges. Unfortunately, only one exploded and there was no indication what damage, if any, was inflicted.

A month after these April attacks Rump's squadron made two more noteworthy contributions to the battle against the U-boats. One night in May F/L J. Musgrave took off from his North Irish base to escort a large convoy from Canada. Eight hours later he met it, carefully checked its composition, and began his patrol. Almost immediately a submarine was sighted on the surface ten miles to one side of the convoy. Skilfully making use of cloud cover Musgrave approached to within a mile of his quarry before the U-boat crew noticed the flying-boat and opened fire. When it was apparent that the enemy intended to fight it out Musgrave abandoned his attack and, obeying instructions, called a corvette from the convoy. Until the latter was within range the Sunderland circled the submarine and engaged in a twenty-minute combat. One shell struck the flying-boat, which fired 2,000 rounds in reply, making numerous hits on and around the conning-tower of the U-boat. The enemy then submerged and the Sunderland closed in, dropping two depth charges just as Swordfish aircraft, the

¹ F/L Bradley and his crew further distinguished themselves a few days later when, escorting a convoy in very poor weather with a very rough sea below and a cloud base only too feet above, they prolonged their patrol at the request of the naval officer in charge of the ships, finally returning after being airborne 14½ hours.

corvette and a destroyer arrived on the scene. The Navy subsequently reported that evidence showed the submarine to have been destroyed. Musgrave and his crew were naturally disappointed that they had not been able to score a kill single-handed, but they had the satisfaction of knowing that it was thanks to their vigilance and prompt action that the U-boat was accounted for.

Later in the month, Long, now a warrant officer, was flying to meet another Canadian convoy when he sighted a conning-tower five miles ahead. Diving all out to the attack, the pilot covered the five miles in 90 seconds and, fifteen seconds after the periscope had disappeared, released depth charges in a stick, straddling the presumed track of the U-boat. A few seconds later large air bubbles began to rise in the centre of the area, while rusty scum coated the surface. For fifteen minutes longer, Long circled about the patch and then, as nothing further developed, resumed his sweep.

An anti-climax was supplied by another Sunderland crew which sighted in the distance what appeared to be a U-boat. Diving to attack, the crew were chagrined to see the "enemy" resolve itself into an escort vessel. An hour later they sighted a second suspicious object which submerged quickly. After reporting their "find" to the convoy the crew kept careful watch over the area and when, after an interval, the "object" reappeared, they dived on it. This time it was a whale!

In addition to tracking down submarines and escorting convoys, Rump's Sunderlands, as has been mentioned, also participated in a great search for survivors of shipwrecked vessels. At midday on May 15th, F/O A. H. Russell's flying-boat was airborne to look for a lifeboat reported adrift on the ocean. Back and forth, hour after hour, the Sunderland flew on its creeping line across the sea. Then, about 8.30 in the evening, one of the crew sighted a white sail which turned out to be a lifeboat with twelve occupants.

Two Thornaby bags, one of which contained a radio transmitter, were dropped alongside and the flying-boat climbed to an altitude where it could get a radio fix and request permission to land on the sea to pick up the castaways. But the light, unfortunately, was beginning to fail and the flying-boat lost contact with the lifeboat. The white sail which had been responsible for the first sighting had been lowered when the shipwrecked people retrieved the Thornaby bags, and despite a protracted search the Sunderland crew could not locate the boat again. On the following days the search was continued by other crews until word was received that, thanks to the radio set which Russell had dropped, the lifeboat and its occupants had been rescued.

The episodes which have been described, however, were the exceptions. For every sortie which resulted in an incident there were a dozen for which the report was merely "duty carried out". Skey's squadron, for example, had been active through these months—its first operation was carried out by the commanding officer on March 1st—but not one submarine was sighted during the hundreds of hours which the Sunderlands spent on patrol over the Atlantic, escorting convoys and rounding up stragglers. Evidence of enemy activity, it is true, was occasionally seen. One flying-boat crew during the course of a single patrol early in March sighted three sinking or burning ships, mute evidence of the toll a U-boat pack had exacted from one convoy.

F/L Limpert, who as a warrant officer had taken part in the Russian convoy operations in September 1942, had two noteworthy experiences during April. Early in the month one engine in his flying-boat blew a cylinder and caught fire, but fortunately the flames died out and the pilot was able to regain his base on three engines. Later in April the same pilot and his crew, while engaged on an air-sea rescue search, located a dinghy floating on the sea off the Island of Tiree and directed a coaster to the scene. The rescue ship

picked up four airmen.

In June both Sunderland squadrons began taking part in the Battle of the Bay of Biscay, sending their flying-boats to patrol over the areas through which enemy submarines moved on their way to and from the Atlantic hunting grounds.

Only one flying-boat had been lost on operations during these ten months. Sunderland "O", captained by F/O E. F. Paige, D.F.C., did not return from a convoy escort on May 24th. Messages and signals were received from the flying-boat up to four o'clock in the morning, when it was well on its way back to base, but no further contact could be established. It was later learned that the Sunderland had crashed near an island off the west coast of Ireland, with the loss of the whole crew. Paige had previously served with the Demon squadron, with which unit he won his gong in May 1942.

July was one of the most successful months in Coastal Command's long battle with the U-boat. R.C.A.F. Sunderlands continued their great sweeping patrols and convoy escorts over the Atlantic, but fortune did not smile and no enemy submarine raised conning-tower or periscope within their range. Most of the action that month was centred in the Bay of Biscay zone, where the Canadian flying-boats also took part in the ceaseless day and night surveillance of the sea.

Late in July the Sunderland squadrons began new patrols, sweeping over the sea north-west of the Hebrides and south-west of the Faroes, covering the sea lanes between those islands and Iceland. Sometimes they flew on to Iceland at the end of their long patrol.

The R.C.A.F. Sunderlands ranged from Reykjavik to Gibraltar in their operations in August. Except for one incident the majority of the patrols could be classed as routine.

One August morning Bishop and crew set out on what was expected to be just the same old routine, but at 0900

hours they sighted a U-boat ploughing along on the surface at about seven knots. As Bishop got in position for a frontal attack, after signalling for help, the U-boat began weaving and the Sunderland pilot was forced to change his tactics. Turning up-sun, he attacked and observed strikes on and around the conning-tower. Further manoeuvring brought the Sunderland in position for a stern attack, but after ten shots the gun went u/s—just as the sub's guns scored a hit on the flying-boat's front turret and controls and started a fire in the port wing.

Despite the difficulty of controlling the wallowing aircraft, depth charges were dropped in a nice pattern—but the Sunderland could not remain airborne and while a landing was being attempted her wing dropped and she nosed into the sea. The submarine, with her crew lining the forward deck, was moving towards the scene when suddenly there was a terrific explosion and she sank stern first.

Ten minutes later, a destroyer hove on the scene and picked up six wounded members of the Sunderland's crew as they clung to their dinghy. Five others, P/O H. Parliament, FS J. B. Horsburgh and Sgts. H. Gossop, P. McDonnell and F. Hadcroft, were reported missing, believed killed. In addition, twenty-three survivors of the undersea raider were taken prisoner. Bishop, who two days before had done most useful work in rounding up stragglers from a convoy, supported one of his wounded crew who had lost his Mae West, until help arrived.

In recognition of his achievement, Al Bishop was given an immediate award of the D.F.C.

CHAPTER XVI

THE BATTLE OF THE BAY

THE Battle of the Atlantic has been essentially the problem of the Royal Navy, the Merchant Navy and Coastal Command. In the Battle of the Bay, however, all operational commands of the R.A.F. have had a part, together with the forces of the Navy. Bomber Command repeatedly has hammered at the bases of Lorient and St. Nazaire, Fighter and Army Co-operation Commands have sent their aircraft on long escort patrols over the Bay, while Coastal Command has maintained a ceaseless vigil, attacking enemy U-boats, fighting off enemy aircraft, endeavouring to close as much as possible the great gap between the Brest Peninsula and the northwestern tip of Spain.

From the moment France fell this area became one of the vital war centres. From the Biscay ports German submarine packs went out into the Atlantic to harry our convoys; from these ports enemy surface raiders, too, might slip out to menace our shipping lanes. As the months passed and the German U-boat campaign increased in intensity the importance of the battle being waged in and over the Bay likewise increased. One period of maximum activity was reached in the late fall of 1942 when large convoys were being despatched to North Africa and it became of the utmost importance to guard them as they passed this danger

zone on their way south.

In this long campaign all R.C.A.F. units of Coastal Command as well as one of our bomber squadrons and the army co-operation units have at one time or another been engaged. The Demon squadron was the first R.C.A.F. unit to take part in the battle, flying its Hudsons to a station in south-west England at the beginning of October 1942. This new work, that of making antisubmarine patrols over Biscay, was much less exciting than its former role as a strike squadron smashing at German convoys, but it was certainly of equal importance. The U-boat menace had to be checked; our convoys then being prepared for the North African operation must get through. So if the long and often monotonous patrols over the Bay were less productive of *obvious* results than the Demons' smashing attacks on German convoys, if now they dropped leaflets on Spanish fishing vessels instead of bombs on enemy merchantmen, the Hudson crews at least had the satisfaction of knowing that they were contributing in some measure to the success of great undertakings.

Yet exciting incidents did occur, though not as frequently as the crews would have wished. One patrolling Hudson sighted an enemy tanker off the French coast on October 24th and, in true Demon style, bombed it with three depth charges which, it was believed, caused serious damage. A second Hudson encountered two E-boats which it attempted to attack, but the bomb doors refused to open and the crew had to be content with machinegunning the enemy.

Although no enemy submarines were sighted during these patrols, an enemy seaplane tender was reported by one Hudson crew on the 9th while a second on the 30th of the same month saw an Arado seaplane in the distance, but did not recognize the strange type monoplane until too late to engage it. One Hudson was lost during these operations when FS M. Zumar and his crew failed to return from a

sortie on the 20th. Searches over the Bay, in which a brother of the missing pilot participated, were fruitless.

Late in October the Demons were joined by a second Canadian squadron. This unit, equipped with Halifax heavy bombers, had been the first R.C.A.F. bomber unit to go into action. Now, after a long period of successful attacks on German and Italian targets, it was detached from Bomber Command and under its commander, W/C L. G. D. Fraser, flew to a station in southern England to operate with Coastal Command. The Halifaxes were sent out, three or four at a time, to sweep far south over the sea in search of enemy submarines or surface shipping.

On one of their patrols the squadron was instrumental in saving a crew down at sea. A Halifax, making a patrol on October 31st, saw a red distress signal fired some miles away and, on investigation, located a dinghy bearing five or more men. After reporting the location, the Halifax circled the area, endeavouring to keep the dinghy in sight, until an air-sea rescue Hudson and a patrol boat arrived.

November 1942

November, when the convoys of British and American troops were on their way to North Africa, was marked by an intensification of activity on both sides and several encounters took place between R.C.A.F. aircraft and enemy fighters, submarines and ships.

The Demons made first contact with the foe on the 6th when three Hudsons sweeping an area 100 miles southwest of the Brest Peninsula were attacked by three Arado 196 floatplanes. Sgt. T. M. O'Neill, rear gunner in P/O L. H. Jenner's Hudson, fired several bursts into one Arado, which crashed into the sea.¹ A second was driven off with its tail unit damaged after receiving bursts from FS J. D. Fergusson's front guns, and then the third Arado was seen

¹ This was the first enemy aircraft destroyed by the Demon squadron during the fourteen months it had been on operations.

to go down out of control. It is believed to have crashed into the sea. Only one of the Hudsons received slight damage. After this encounter FS R. C. Dalgleish, whose rear gunner, Sgt. J. H. Clancy, had accounted for the third Arado, resumed his sweep and attacked a ship on which he claimed a near miss.

A few days previously the Demons had lost their commanding officer, W/C C. F. King, when his Hudson crashed into the sea while engaged in low-level bombing practice. The squadron now returned to East Anglia as its aircraft had insufficient range for the long patrols over the Bay. However, detachments continued to operate from south-of-England bases for some weeks longer and eventually, after being re-equipped with Wellingtons, the squadron returned to the Bay in April 1943

A detachment of the R.C.A.F. Hampden squadron had also been operating from the same station as the Demons during the latter part of October and early November. One Hampden returning to this base after a strike over the Bay of Biscay on November 1st crashed into a petrol dump and a lorry and burst into flames. "The entire scene became an inferno of blazing petrol and exploding ammunition and there was imminent danger of the detonation of a torpedo which was in the aircraft. The navigator was pinned by the legs and unable to free himself. Displaying great persistence and complete disregard for his personal safety," FS D. M. Coates, the wireless operator air gunner, "succeeded in extricating the navigator. He then went to the aid of the pilot, who was also pinned by the legs and unconscious, and endeavoured to release him until his own face and wrists were too severely burned to permit him to continue. Throughout his heroic endeavours to release the pilot, FS Coates faced the risk of sudden death. It was only when the intensity of the conflagration surpassed human endurance that he left the aircraft, and, even then, he assisted the navigator whom he had rescued to move further away to

safety.” In these terms the *London Gazette* announced the award of the George Medal to Coates.

F/O W. H. Adams, another member of the Hampden detachment in Cornwall, of whom we have written in an earlier chapter, made a lone sortie with his crew on the afternoon of November 6th and attacked a convoy of one merchant vessel and its three-ship escort. Heavy and accurate flak met the Hampden as it made its run-up on the target but no result could be observed because of necessary violent evasive action. The following afternoon, two more Hampdens found a medium sized merchant ship escorted by a naval vessel steaming off the mouth of the Gironde River. One pilot flew in to the attack but the torpedo missed. The second Hampden then attacked but was struck by the heavy barrage of flak and was last seen flying close to the sea with one engine on fire and heading for the French coast.

The Halifax squadron fought another action on the following day in the same area when three crews attempted to bomb two large merchant vessels, a submarine and two other ships. Results of the attack could not be observed, and one of the Halifaxes did not return. A second, captained by Fraser, was attacked by three Arados and fought a long action. The Arados' first bursts put the starboard outer engine of the Halifax out of action but the pilot dived to sea level while his gunner returned the enemy's fire. Even with only three engines running the heavy bomber was able to outdistance the Arados, which finally broke off the attack.

Two Halifaxes made another attempt to bomb the ships by night, but poor visibility hampered their effort. Three more attacks were made on enemy vessels during the month, but accurate results could not be assessed. Once a salvo of bombs which was dropped near an M-class enemy ship appeared to damage it, and in another case a crew attempting to attack two merchant vessels escorted by two destroyers encountered such heavy defensive fire that accu-

rate bombing was impossible; however the air gunners took the opportunity to spray the decks of the enemy vessels with repeated bursts.

In addition to these attacks on surface shipping, Halifaxes five times sighted enemy submarines during their patrols. Twice the U-boats crash-dived before they could be attacked, and on a third occasion the depth charges which were dropped over the swirl produced no visible result. Another Halifax out on patrol on Armistice Day surprised two vessels which appeared to be refuelling a submarine. The pilot dived across the enemy flotilla, releasing his bombs which fell short, while the air gunners raked the ships with their machine-guns. Two weeks later another Halifax sighted a submarine escorted by two vessels and attacked the U-boat with three salvos of bombs. Evasive action made it impossible to determine the results.

Acts of gallantry are performed by airmen on the ground as well as in flight. A Halifax returned from a patrol on the 26th with only two engines working properly. In attempting a forced landing the aircraft bounced off the runway and caught fire. All the crew except the mid-upper gunner were able to get free of the wreckage. With great courage and gallantry the pilot, Sgt. R. A. Symes, and the flight engineer, Sgt. A. W. Nichols, re-entered the blazing machine and succeeded in extricating the trapped man just before the gas tanks exploded. Both sergeants were decorated with the British Empire Medal.

December was quieter after the action of the previous month, but the enemy was still on the alert. His fighter aircraft were also patrolling over the Bay attempting to end the constant surveillance which Coastal Command maintained over the waterways. R.C.A.F. aircrews on a number of occasions encountered Arados, Ju. 88s and FW. 190s, and in early December, just a month after Fraser's engagement with three Arados, another Halifax fought an air battle with two Ju. 88s. The crew had sighted an enemy convoy

and were shadowing it when the enemy aircraft appeared, called up no doubt by the convoy. One closed in to 50 yards and opened fire but our rear gunner, P/O K. R. Pay, was ready and got in a long burst as the Junkers swept past. The Jerry dived vertically into the low mist with smoke pouring from the starboard engine, apparently out of control. The second Junkers made three attacks which the mid-upper gunner, Sgt. A. E. Horne, countered with accurate bursts. After the third attack the enemy machine spiralled down and splashed into the sea. Both Junkers had undoubtedly been destroyed.

Late in November command of this R.C.A.F. Halifax squadron had passed from Fraser to W/C A. C. P. Clayton. The new C.O. was a Canadian, a resident of Vancouver, who had joined the R.A.F. just before the war. From December 1939 to October 1940, and again from April to July 1941, he flew Hampdens on many mining and bombing missions with one of the famous squadrons in Bomber Command. The Distinguished Flying Cross was awarded to him in December 1940 in recognition of his services during his first tour of operations. When the first R.C.A.F. Hampden squadron was being formed in 1941 Clayton was posted to it and again distinguished himself on many raids, particularly during a number of combined fighter-bomber daylight operations in September 1941, which won him a Bar to his D.F.C. in February 1942. Clayton now returned to the R.C.A.F. as commander of its first heavy bomber squadron.

1943

The Halifaxes, under Clayton's leadership, continued their work with Coastal Command through the first two months of 1943, patrolling over the Bay in search of submarines, escorting convoys as they carried more troops and supplies to North Africa. With few exceptions their sorties were completed without incident. French and Spanish

trawlers were frequently sighted but only three enemy submarines were encountered during the many hundreds of hours which the Halifaxes spent over the Bay in January and February. Only one of these sightings led to an attack.

While Symes and his crew were on patrol on February 12th they sighted a conning-tower five miles away and dropped their depth charges ahead of the swirl as the U-boat plunged beneath the surface. A ten-minute search of the area revealed no evidence that any damage had been done but the crew were confident that they had at least given the enemy a good shaking.

Enemy aircraft were seen on a few occasions and once again, as in November and December, there was a heated combat. Halifax *G for George*, piloted by F/O W. W. Colledge, was on patrol over the sea at 1400 hours on February 4th when four Ju. 88s were sighted approaching from behind, two to port and two to starboard. One of the latter attacked first, firing on the Halifax as Colledge made a cork-screw dive from 7,000 to 3,000 feet. Sgt. E. A. Taylor, the mid-upper gunner, returned the enemy's cannon and machine-gun fire as the Junkers closed in to 100 yards. His bursts took effect. The port engine of the enemy fighter began to belch smoke, following which it dived headlong into the sea. The second Junkers attacked from starboard but his bursts missed while P/O J. H. Steward, the rear gunner in the Halifax, brought his guns into action. Next one of the enemy on the port beam attempted to close in but after Taylor made several hits, causing the port engine to smoke, the enemy sheered off. Keeping well away to starboard the remaining Junkers took advantage of the sun to make six further individual attacks all of which were beaten off. Colledge was finally able to gain cloud cover and returned to his base. He was awarded the Distinguished Flying Cross and Taylor the Distinguished Flying Medal for their coolness and skill in this thirty-six minute running fight over the sea.

During January Bomber Command had taken a very vigorous part in the Battle of the Bay, repeatedly hammering the submarine bases, and one night Clayton's Halifaxes returned to their old role and joined in the bombing offensive. Bordeaux was the target that night (January 26th), but the weather was so bad that only a few of the Canadian crews were able to locate the harbour and bomb through gaps in the heavy cloud banks. The other crews after long searches had to return.

At the end of February the Halifax squadron ended its fourmonth attachment to Coastal Command and returned to its former base in northern England to resume bombing with the R.C.A.F. Group. A/V/M J. C. Slessor, then A.O.C. of the Coastal Command Group, in expressing to Clayton his regret at losing the services of the squadron, wrote:

I'm afraid the job had not been as interesting for the crews as their proper job in Bomber Command, but you've had some good attacks, and apart from that, I'm sure your crews realize how very important and valuable their work has been, particularly during the time when those large convoys were going to North Africa, practically without loss, thanks largely to the work of your squadron and the others in the Bay.

The Admiralty also expressed its appreciation of the valuable assistance given by the R.C.A.F. Halifaxes. "The vigorous flying effort made by this squadron in all weathers has contributed greatly to the safety of many most important convoys in a dangerous area and to the Bay offensive which has severely restricted the U-boat operations."

Beaufighters Enter the Battle

Fast, powerfully armed R.C.A.F. Beaufighters, midgets alongside the huge Halifaxes, also took part in the great air and sea campaign during the early weeks of 1943. For a long time this Coastal Fighter squadron had served with distinction in operations off the coast of Norway. Now, at

the end of January, it left its base in the far north of Scotland for a two-month visit to southern England. The intensification of the Luftwaffe's defensive patrolling over the Bay of Biscay made it necessary to provide long-range fighters to protect our own reconnaissance aircraft.

After a period of training the R.C.A.F. Beaufighters began operations in mid-February. Among their duties were interception patrols in the hope of catching the Luftwaffe meteorological planes which flew over gathering weather data. The elusive Hun, however, did not put in an appearance and the Beaufighter crews had nothing more exciting to report than drifting rafts, dinghies or mines.

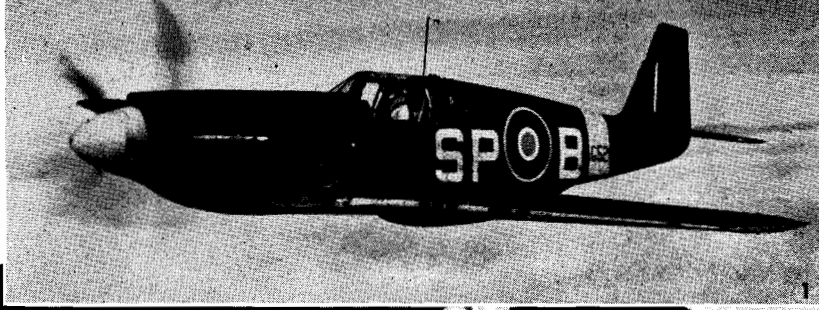
Nor were the convoy escorts and fishing-fleet patrols which Truscott's crews carried out during these weeks more productive of incident. Long-range interception patrols over the Bay, however, did produce one fleeting action with the foe. On that occasion, on March 23rd, six Beaufighters sighted and gave chase to seven Ju. 88s. The enemy aircraft fled into the protecting cover of cloud but FS V. F. McCallan was able to fire several cannon bursts at one before it was lost from sight. Pieces flew off the port wing of the Junkers and the engine began to discharge "a continuous stream of heavy, black smoke" as it disappeared in the enveloping folds of cloud.

A week after this brief engagement Truscott's Beaufighters left the Bay campaign to resume operations in the Norwegian battle zone.

While R.C.A.F. Halifaxes and Beaufighters were patrolling over the Bay by day, detachments of R.C.A.F. Hampdens from time to time made strikes by night. Once, in January, they carried out a bold daylight attack on a target close to the French coast west of Lorient. The Hampdens had neither cloud cover nor fighter escort, but it was expected that a simultaneous raid against Lorient by a formation of Fortresses would draw off enemy fighters and prevent interference with the torpedo-bombers. The



ABOVE: F/O Frank E. (Hank) Hanton.
BELOW: W/C P. Y. Davoud, D.F.C., and Beau. The tip of a German propeller is shown, bearing the record of Davoud's night fighter squadron.



1. Mustang of an R.C.A.F. Army Co-operation squadron in flight. 2. R.C.A.F. Army Co-operation pilots receive final instructions from their Wing Commander before taking off on their mission. *Central Press Photo.* 3. Train after a typical attack by R.C.A.F. train-busters. 4. F/L Frank Grant.

R.C.A.F. formation found the target but the ship was so small that a concerted torpedo attack hardly seemed justified and after machine-gunning the boat the Hampdens returned unmolested.

Strong opposition met another striking force which W/C G. H. D. Evans led into the Bay on the night of April 10th. A convoy of five ships was intercepted—an 8,000-ton merchant vessel heavily guarded by a destroyer and three escort ships—and in the face of intense and accurate heavy and light flak fire from all five vessels, the five Hampdens carried out their torpedo attacks. All of the aircraft were considerably shot up and one, piloted by FS G. A. Cline, was seen to go down near the blockade runner. Evans's Hampden "Z" was set on fire and the port engine began to falter. Flames and smoke filled the fuselage and the situation appeared desperate but after an S.O.S. was sent, Sgt. E. H. Smith, the New Zealand rear gunner, courageously tackled the flames and eventually succeeded in extinguishing them, although his hands and face were scorched. The Distinguished Flying Medal rewarded Smith's "high courage and devotion to duty" on this critical occasion.

The Demons Return

In April the Demon squadron, now equipped with Wellingtons, came down from Scotland to share again in the extensive operations over the Bay of Biscay, taking over the quarters of the R.C.A.F. Beaufighter squadron, which went back north. On April 19th the Demons began operations, making long night anti-submarine patrols over the sea. They did not have to wait long for action, as six submarine attacks were made during the first eight weeks.

The first two were made by F/L D. G. Pickard and his crew during the course of one patrol on April 22st. With a clear sky above them and a calm sea below, the Wellington crew caught sight of a fully surfaced submarine and manoeuvred to attack while the enemy opened fire with can-

non and machine-guns. The Wimpy's rear gunner returned the fire and made hits on the conning-tower. After the U-boat had submerged Pickard attacked from a low height, releasing depth charges along its track. All exploded but no results could be observed.

A few minutes later the same crew saw another submarine on the surface silhouetted in the moonlight. The enemy was apparently taken by surprise and once again the rear gunner was able to deliver effective bursts as the Canadians dived across the submerging U-boat. These encounters took place 150 miles or so north of Cape Ortegal.

A week later, on the 28th, F/O C. D. Cross, one of three pilots, out on patrol, made the Demons' third attack. After discerning a tell-tale wake, Cross sighted the submarine which opened erratic fire. The rear gunner replied until the enemy submerged. Once again depth charges were dropped from a low height, straddling the U-boat's track, but no results were seen.

On May 4th F/O B. W. Pritchard made the Demons' fourth attack. Despite a rough sea and haze, the Wellington located a submarine on the surface west of the Scilly Isles and closed in to attack. Depth charges were dropped over the swirl where the enemy had crash-dived.

A daylight patrol on the 24th led to a fifth encounter when P/O E. L. Shuttleworth, second pilot with FS N. C. C. Luther, sighted a wake eight miles ahead of the Wellington as it patrolled north-west of Cape Finisterre. The U-boat crash-dived before an effective attack could be made. After stalking the enemy for a time Shuttleworth again sighted his quarry, or another submarine, on the surface, and Luther dived out of the sun to attack. Once more the enemy disappeared beneath the waves before the Wimpy was in a favourable position.

Early Summer

These five attacks produced no definite results, but a

sixth, carried out by F/O G. C. Walsh during a daylight patrol in early June, appeared to be more successful. As the Wellington was flying through scattered strato-cumulus cloud the second pilot, P/O W. C. Otwell, caught sight of a submarine wake two miles to starboard. The enemy had just started to crash-dive but, swinging about on his course, Walsh dived to the attack and released depth charges 18 seconds after the U-boat disappeared. All exploded, straddling the track of the swirl and for ten minutes bubbles continued to rise to the surface, spreading over an area 60 feet in diameter. When the bubbles ceased oil and scum came to the top, forming a huge patch 400 feet across.

These crews were the lucky ones, however. The majority completed their day or night patrols without any such excitement. On many occasions fishing vessels and infrequently aircraft were sighted. Sometimes the latter proved to be other friendly machines out on patrol, but a careful watch had to be maintained at all times lest the distant speck in the sky grow into a Junkers or a Messerschmitt. One air combat did take place.

Enemy aircraft appeared to be especially active on the 29th. One of the three Wellingtons which the Demon squadron had out over the Bay that night sighted several hostile machines but successfully evaded them. A second, piloted by S/L R. Y. Tyrrell, was attacked by two enemy aircraft, probably Me. 210s or 410s, carrying orange and white wing-tip or nose lights. Tyrrell skilfully evaded the first as it closed in, firing cannon and machine-gun bursts at close range. As the enemy broke away the Wellington's rear gunner, Sgt. R. W. Johnson, fired a burst into it. Then the second came in, opening fire at long range and closing to 150 yards. Once again Johnson brought his guns to bear and saw a flash in the enemy plane followed by flames. The Hun disappeared in the distance, apparently on fire. Three more Jerries then appeared, taking up position on each side and to the rear of the Wellington. The two flank machines

attempted to attack but once again Tyrrell's skilful evasive tactics shook them off and *S for Sugar* returned to her base unscathed, with one probable Victory to her credit.

As the third Wellington, bearing Luther and his crew, did not return that night it seems probable that it was intercepted and shot down. This was not the only loss suffered by the Demons during their participation in the Battle of the Bay. Late in April one Wellington crashed into the sea when returning from a night patrol. The whole crew was lost. A month later a third crew failed to return from another night sortie.

All the squadron's work was not destructive in intent; errands of mercy too were flown. On one of these Pickard, carrying out an air-sea rescue search on a day of poor visibility, located a Sunderland flying-boat which had landed on the sea to pick up the crew of a dinghy and directed a destroyer to its assistance,

The Hampdens Are Back

After a period of relative quiet the Hampdens, too, returned to the Bay in the latter part of June, this time to make daylight anti-submarine patrols. No enemy submarines were sighted and apart from the loss of one aircraft on June 14th there was little to report. The pilot of the missing Hampden, S/L J. G. Stronach, was a veteran member of the squadron. Another Hampden returning from a patrol had both engines cut out while still over the sea. The crew jettisoned depth charges, guns and ammunition and were preparing to ditch the machine when the port engine picked up. The Hampden was then only 300 feet above the waves, but the pilot coaxed it across the coast and made a successful crash-landing.

In addition to the R.C.A.F. landplanes which had been engaged in the Bay since October 1942, R.C.A.F. Sunderland squadrons in June 1943 also began to take a hand in the campaign, using their huge flying-boats to make long-

range anti-submarine patrols from the Bristol Channel to the coast of Spain.

Skey's squadron was the first to encounter the enemy in this new area of the Sunderlands' activity. One crew, captained by F/L S. W. Butler, through the haze of a June day sighted three large U-boats on the surface less than a mile away. The submarines at once opened fire with 20 mm. cannon and other weapons while the flying-boat circled firing bursts. The engagement continued until the Sunderland crew lost sight of the enemy in the haze.

Wellingtons, Hampdens and Sunderlands continued their patrols and sweeps over the Bay during July, the month which marked a definite advance in Coastal Command's long offensive against the enemy under the sea. While many successful attacks were made by Coastal aircraft in the course of the month, R.C.A.F. crews had little luck. They played a vital part in the campaign and had the satisfaction of knowing that the day was going well even if the thrill of a decisive kill was denied them.

Night after night Archer's aircrews of the Demon squadron patrolled over the Bay, sweeping back and forth on their Wellingtons, watching for U-boats trying to slip unobserved through our aerial blockade. For seven or eight hours at a stretch they patrolled the sea but, apart from other aircraft on similar sentry-go, or our own naval units, they had little to report.

Evans's Hampden crews took over the anti-submarine patrol work in the morning as the Wellingtons of the Demon squadron were returning to base. With few exceptions they too returned with reports of "nothing sighted". Occasionally an oil slick was seen, or a raft or some boats but there was only one encounter with the enemy. On that occasion, the morning of July 6th, FS H. P. Clasper and his crew were attacked by a Ju. 88; twice the enemy machine closed in firing bursts, all of which missed. Clasper jettisoned his depth charges and evaded the Junkers by taking cover in the clouds.

R.C.A.F. V.L.R. (Very Long Range) Sunderlands were also out over the Bay on almost every day of the month but their long patrols too passed with few incidents to note. One squadron, now commanded by W/C L. G. G. J. Archambault, W/C Rump's successor, twice made contact with the foe, once on the sea and once in the air. On July 3rd, one of the Sunderlands captained by F/O H. C. Jackson sighted the wakes of three submarines; the enemy opened fire on the flying-boat as it approached and then submerged. So rough was the sea that the Sunderland crew, when they arrived over the scene, could find no tell-tale swirl to mark the spot where the enemy had dived.

Three weeks later, on the 22nd, Musgrave's Sunderland was attacked by a FW. 200 (Kurier) while on patrol. The enemy gunner's first bursts put the flying-boat's gun turrets out of action and slightly wounded the front and rear gunners and second pilot. Hits were made all over the Sunderland, puncturing the hull above and below the water-line and rendering some of the controls unserviceable. Musgrave shook off the attacker and escaped into cloud cover. Despite the damaged condition of his aircraft he made a masterly landing at his base.

Skey's crews sighted the enemy only once during the hundreds of hours which they spent on patrol during July. On the 28th P/O J. F. Wharton and his crew spotted two U-boats on the surface about 250 miles north-west of Cape Finisterre. As they flew to engage the submarines, eight miles distant, the Sunderland crew saw a Catalina drop several sticks of depth charges or bombs, which appeared not to explode. Another Sunderland also flew up to join in the attack. By the time the R.C.A.F. boat reached the scene, however, the U-boats had been submerged for several minutes, so no depth charges were dropped.

Excitement Increases in August

If July brought little excitement to our units, August

provided ample compensation. Night and day through August, R.C.A.F. aircraft continued their aerial blockade of the Bay. Our Demon Wellingtons in the course of over 800 hours' flying by day and night twice engaged the enemy. Archer, the C.O., fought the first action. He and his crew had been out almost four hours, flying through patches of rain, when they sighted the wake of a U-boat ten or twelve miles dead ahead. Climbing into cloud cover, Archer carefully stalked his quarry and when he had closed the gap to a bare two miles dived to the attack. The U-boat was taken by surprise and several members of the crew could be seen on the aft gun platform and bridge. From fifty feet the Wellington dropped its depth charges diagonally across the submarine's track from the starboard bow to the port quarter. One after the other exploded in quick succession, some on one side, some on the other, enveloping the U-boat in a huge shower of spray. As the Wellington was diving the front gunner fired three bursts from 100 yards' range, scoring hits on the conning-tower. Then the rear gunner opened up, firing 400 rounds into the centre of the columns of water, and spray flung up by the explosions. As Archer climbed away the U-boat could be seen still on the surface, circling to port. No debris or oil appeared on the surface but the submarine seemed to be damaged as it did not submerge and continued its slow lefthand circles. For fifty minutes the Wellington crew kept it under observation, remaining out of range of the U-boat's guns; then, when a diminishing supply of gasoline forced a return to base, they dropped markers in the area so that other aircraft might locate it. By a strange coincidence the R.C.A.F. Hampden squadron also had an engagement with a U-boat in the Bay at almost the very moment that Archer was attacking his submarine. The two aircraft, a Wellington and a Hampden, had taken off from different stations, one just 20 minutes after the other, that August morning. At 0928 the Demon crew sighted their foe; 25 minutes earlier the Swordfish

team, captained by S/L C. G. Ruttan, had also sighted a U-boat as it rose to the surface. The Germans opened fire but when the Hampden sought to reply its front gun jammed after 10 rounds. Nevertheless Ruttan continued his attack and from 100 feet altitude released his depth charges across the submarine's course. Their explosions apparently disabled the Hun, for its speed fell to three knots and it made no attempt to submerge. Ten minutes later a Liberator roared in to the attack and after its charges had hurled huge pillars of water into the sky the submarine was no longer to be seen. After an interval about 15 bodies bobbed to the surface surrounded by large quantities of wreckage and diesel oil. Thanks to the initial attack of Ruttan and his crew, one U-boat had been struck off the list. Later that day Ruttan became a wing commander, succeeding Evans in command of the Swordfish (Hampden) squadron.

The day's excitement had not ended. That morning a second Hampden crew sighted a Sunderland and a Catalina circling an oil patch; they then observed a dinghy carrying a crew of four and a second dinghy upside down—these were believed to be German and may possibly have been connected with the squadron's third sortie of the day.

Savage and his crew had also seen sloops and a Sunderland circling around a large oil patch. Later in the patrol their Hampden was attacked by five Ju. 88s which came in from all angles and quarters. Depth charges were jettisoned and while the pilot corkscrewed and made for the scanty cloud cover whenever possible, the air gunners returned the enemy's fire and saw hits on nearly all the attacking Junkers. After a time the rear gunner's ammunition became almost exhausted and the enemy pilots, sensing this, concentrated their attacks from the rear. For twenty minutes the unequal combat continued until finally Savage escaped and set course for base. *T for Tommy* had been badly damaged; the hydraulics had been shot away, the petrol tank punctured, elevators damaged, the perspex in the pilot's cockpit blown

away and the fuselage and mainplanes riddled with bullet holes. Miraculously, none of the crew—F/O F. A. Brockwell and Sgts. J. E. Mason and S. J. Babyn—was injured and Savage brought *Tommy* safely back to base. All in all it had been an exciting day for the Swordfish squadron.

Other patrols over the Bay during August were less eventful, although F/O R. Armstrong and his crew had some anxious moments during their sortie on the 18th. The port engine began to vibrate badly and after about 20 minutes broke loose from its mounting and fell into the sea. With only one engine left in his crippled aircraft, Armstrong was forced to ditch about five miles from the Scilly Isles, and with his crew scrambled into the dinghy. A launch soon arrived and picked them up.

CHAPTER XVII

ARMY CO-OPERATION

COASTAL COMMAND works in close co-operation with the Royal Navy, and other units of the air forces are specially trained and equipped to operate with the Army. Their duties are to make tactical reconnaissances for the ground forces, report the location and movement of enemy troops, locate targets for our artillery and range the battery's fire upon them, carry out photographic missions and, in short, act as the far-seeing eyes of the commander of the ground forces. A thorough knowledge of the terrain over which they operate is obviously essential, and army co-operation pilots spend many hours studying large-scale maps of their target areas, making relief maps and reproducing from memory details of the ground features. This knowledge is all the more vital since, in the new technique of army co-operation work, pilots fly at minimum altitude, literally skimming the ground and taking advantage of every bit of cover afforded. In this way the pilot gains the benefit of surprise, diminishes the accuracy and duration of effectiveness of antiaircraft and ground fire directed against him, while at the same time he is able to pierce the enemy's attempts at camouflage which could not be detected from a greater height. R.C.A.F. army co-operation squadrons have, as yet, had little opportunity to apply in practice the lessons they have learned in their

tactical exercises; but while awaiting "the day", they have taken on other tasks to keep in fighting trim. Photographic reconnaissances on both sides of the English Channel provide our staffs with most valuable information, and give the pilots equally valuable operational experience. More recently, an offensive role has been added and army co-operation pilots now carry out ground strafes over the enemy-occupied coasts.

The first R.C.A.F. squadron to land in England was an army co-operation unit, equipped with the sturdy two-seater Lysander aircraft, powered with a Mercury engine. But the Lysander, like many other types of aircraft in service at the beginning of the war, has been superseded by faster and more formidable machines. In the spring of 1941 the Tomahawk (R.A.F. version of the Curtiss P. 40), a fast single-seater originally designed as a fighter but found to be more effective at low levels, became the Lysander's successor. In turn, the Tomahawk gave way in June 1942 to the Mustang (North American P. 51) which, like the Tomahawk, is of American design and manufacture.

For almost thirty months the R.C.A.F. army co-operation pilots were forced to spend their time in watchful waiting. The time was not wasted, but to eager young men with their minds on the ever-spreading battle, in which by unlucky chance they could have little or no part, the days were long and the training irksome. Tactical exercises with the army, though mutually beneficial, were a poor substitute for the real operations, into which they saw aircrew who had left Canada much later than they plunge and emerge seasoned veterans. Testing new equipment is a poor substitute for actual battle experience. Is it, therefore, any wonder that their adventurous spirits chafed under the restraint, or that from their point of view it seemed to be a "phony" war? It is a tribute both to their commanding officers and to the good common sense of the men themselves that the situation was borne with so much fortitude and patience.

After months of this weary waiting, a call for air-sea rescue work was a welcome tonic to battle. At least they would be doing something useful—not always flying around the country giving demonstrations for loan drives and such other necessary but, in the eyes of airmen at any rate, nuisance tasks. But air-sea rescue, though it did give the air crews a touch of the real thing, was still not a fighting job.

Army Co-ops Get New Aircraft

So, when they were reorganized and given new kites, singleseaters this time, the change was greeted with cheers, though it did mean the breaking up of the old gang, with the posting of the air gunners to other units. Surely, when the Tomahawks arrived, they'd get a job to do! But it was some months later before they were called upon to do actual operational flying of a really serious nature and it was not until more than a year had passed that they came into their own.

True, in the latter months of 1941, they had a chance when they were ordered to do special reconnaissances of the French coast, and there the things they had learned in months of "co-operating with the army" came to good use. The first operational sortie by an R.C.A.F. army co-operation squadron was carried out on November 6th, 1941, when W/C H. W. Kerby and P/O G. C. H. Jackson reconnoitred a section of the French coast and attacked an enemy gun post. As a result of one of these missions, early in January 1942, P/Os H. P. Peters and N. S. Clarke received personal commendation and congratulations from the Air Officer Commanding-in-Chief, Army Co-operation Command. In addition to completing most successfully a photographic assignment, these two officers had attacked an enemy aerodrome, local transport and barges.

The Tomahawks with which the squadron was then equipped were thought to be well suited to ground-strafting, and the army co-ops. got a new job. Merrily on their way

they went, attacking barges, gunposts and aerodromes. Few enemy aircraft were encountered on these sorties and only one combat actually took place. On this occasion two of our men were returning from France when six enemy fighters intercepted them—and shot both down. The only record of the two aircraft was a conversation overheard by a wireless station listening for their return,—“Hey, on your tail!—I’ll take care of this baby”. And then silence!

At Dieppe

But all things—even boredom—must come to an end. One day in August 1942 came the day for which the army co-operation pilots had waited so long. At last they had an orthodox army co-op. job to do! Their role in the attack on Dieppe was to make low tactical reconnaissances of the roads in the Dieppe area, to watch for enemy troop movements while our forces were making their landing, consolidating their positions and retiring. When August 19th, Dieppe day, arrived, the original R.C.A.F. army co-operation squadron had been reinforced by another similar R.C.A.F. unit and both had a part in the day’s activities. At first light, both squadrons were in readiness and at 0445 the first aircraft took off. From then until the land forces had been withdrawn from the beaches, nine hours later, pilots of the two squadrons, working in pairs, maintained a constant surveillance over the roads in the area. The first sorties covered the districts immediately west and east of the landing points, and as the day advanced they penetrated deeper in both directions until they covered an area extending from Le Tréport, Abbeville and Amiens on the east to Le Havre, Yvetot and Rouen on the west. The dawn patrols had found no movement whatsoever on the roads of the immediate neighbourhood and the later pilots found little anywhere in the district.

On that day, one-half of the army co-operation work was done by R.C.A.F. pilots.

Heavy flak was encountered in many places and the Mustangs suffered a considerable amount of minor damage, but only one of our pilots, P/O Burlingam, was shot down by one of the many FW. 190s which were encountered throughout the day. Another pilot, attacked by FWs. over Dieppe, was forced to ditch his aircraft in the Channel, but was later picked up by a destroyer. His weaver, F/O H. H. Hills, had in the meantime shot down the attacking Focke-Wulf, probably the first time an enemy aircraft had been destroyed in the air by a Mustang. Another weaver, P/O C. H. Stover, while protecting his partner on a deep reconnaissance, was attacked by a low-flying FW. and took such violent evasive action that he ran into a telephone pole and lost three feet from the tip of his starboard wing. Despite this, Stover got his kite back to base, where he had to make a crash-landing.

Dieppe had given the two R.C.A.F. army co-operation squadrons overseas their first full workout in action. Repeatedly in the past they had co-operated with units of the Canadian Army in training exercises; on that one day they co-operated with them in battle. During the next nine months, from September 1942 to May 1943, while the squadrons continued their exercises with army units at home, they began to play a more and more active part in the offensive campaign which Fighter Command was waging against the German army and air force in northern France. Already the Mustang pilots had made numerous low-flying sorties across the Channel to obtain photographs of important enemy coastal positions. Now they also carried out ground strafes, joining in the great train-busting campaign of Fighter Command, and, flying with the Spitfires and Whirlibombers, made shipping reconnaissances up and down the Channel. In addition to these offensive missions the army co-ops flew defensive patrols along the south coast to watch for enemy sneak raiders, and escorted other aircraft on missions far over the Bay of Biscay. To

receive training and gain experience in these new operations the Mustang pilots were attached at times to groups and stations of Fighter Command.

Ground strafes and photographic missions are dependent upon weather conditions; adequate cloud cover must be available to permit the pilots to reach their objectives and return again with the minimum possibility of interception by enemy fighters or opposition by ground defences. Conditions during September were none too favourable and only a few of these missions could be completed; many others which had been planned had to be cancelled. During one successful sortie late that month Peters, now a F/L, and P/O J. H. Watlington obtained excellent photographs of a strip of the French coast for which they were congratulated by the Air Officer Commanding-in-Chief, Army Co-operation Command.

Fall and Winter

October was a more active period, both squadrons engaging in a number of low offensive operations across the Channel in addition to the defensive patrols and usual exercises and demonstrations at home. Twelve pilots carried out ground strafes with good results. On October 13th, Hills and P/O F. J. Champlin (two American pals) crossed the Channel to Etretat on the French coast north of Le Havre, where they found a large engine drawing a train of 20 freight cars and 20 tank cars. Opening fire on the locomotive the pilots saw an explosion in the cab, after which the train stopped, enveloped in steam. Sweeping inland to Bolbec they fired further bursts into several gasometers before turning their Mustangs for home. Later in the month, on the 24th, Hills made a second successful low-flying attack on another engine in the same area. This time he encountered light flak and the tail assembly of his Mustang was hit and very severely damaged. Despite this, the pilot brought his mount back to a base in England. He was one of the two

pilots of his squadron mentioned in the New Year's Honours List for services at Dieppe. With his compatriot, Champlin, Hills later transferred to the United States Naval Air Corps.

Between the two ground strafes performed by Hills the R.C.A.F. Mustang squadrons had carried out a large-scale attack in conjunction with other army co-op. units. Favoured by low cloud and rain, twelve pilots on October 22nd hedge-hopped over the French coastal lands between the Somme and the Seine, turning their guns on trains, military transport, electric power lines and other targets. Four Canadian pilots, led by S/L W. B. Woods, attacked the railroad yards at Amiens, while farther west two more chased a train at Doudeville. "The train (the squadron commander reported) took evasive action by stopping dead in between a long double row of trees, so we both came down to tree level, flew between the autumn foliage and had, the satisfaction of seeing our bullets explode on the engine. Our first bursts were followed by clouds of steam."

Low attacks on ground targets also featured November's operations. On the 7th F/Os S. M. Knight and F. E. Hanton crossed to Caen, in Normandy, but found their primary objective obscured by dense fog and attacked any alternative targets they could locate. On their return flight the pilots became separated due to the poor visibility and Hanton, flying at sea level about five miles from the French coast, suddenly noticed two enemy aircraft on his tail. Taking immediate evasive action the R.C.A.F. pilot pulled his Mustang up to 800 feet and then fired a burst at one of the enemy as it flashed across his sights at 300 yards range. Large pieces flew off the tail assembly of the Me. 109 as it dived vertically and disappeared. Hanton's probable was the first victory credited to his squadron.

Later in November five ground strafes were completed under more favourable conditions, in the course of which 14 locomotives and numerous other ground targets were

attacked in the Cherbourg peninsula and Normandy. One of these sorties, by Peters and F/O M. B. Pepper on the 19th, struck at the railway line running along the western side of the peninsula from La Haye du Puits to Pontorson; four locomotives were attacked and damaged. Pepper's machine received two hits from light flak. During their two-hour sorties the pilots covered over 350 miles, a record distance in the squadron for a ground strafe. F/Os R. W. Clarke and E. E. Tummon also shot up four freight engines during their penetration into the same area (Granville-Avranches) on the 28th. While diving low to fire on one train Tummon struck a tree, damaging one wing and rendering several instruments unserviceable. The sturdy Mustang was able to return to its base despite the damage.

December was less eventful, although one shipping reconnaissance, in which W/C R. C. A. Waddell and three of his pilots participated in company with Spitfires and Whirlibombers, encountered enemy fighters over the Channel. Bunt Waddell's Mustang returned with a few bullet holes in the tailplane.

Since the latter part of October both R.C.A.F. squadrons had maintained standing defensive patrols off the southern coast of England on guard against enemy daylight raiders. On several occasions the patrolling Mustangs gave chase to enemy aircraft but were unable to close to effective firing range.

In December one of the squadrons began another phase of operations, when it sent a detachment under Woods to a station in southwest England to carry out long-range patrols over the Bay of Biscay. The Battle of the Bay was growing in intensity as the Luftwaffe strengthened its defensive patrols over the area and in reply the R.A.F. sent fighters to protect our aircraft engaged on anti-submarine patrols and reconnaissances. For six weeks the R.C.A.F. detachment continued in the Battle and shared the credit for forcing the Luftwaffe to withdraw its Arados, which previously had

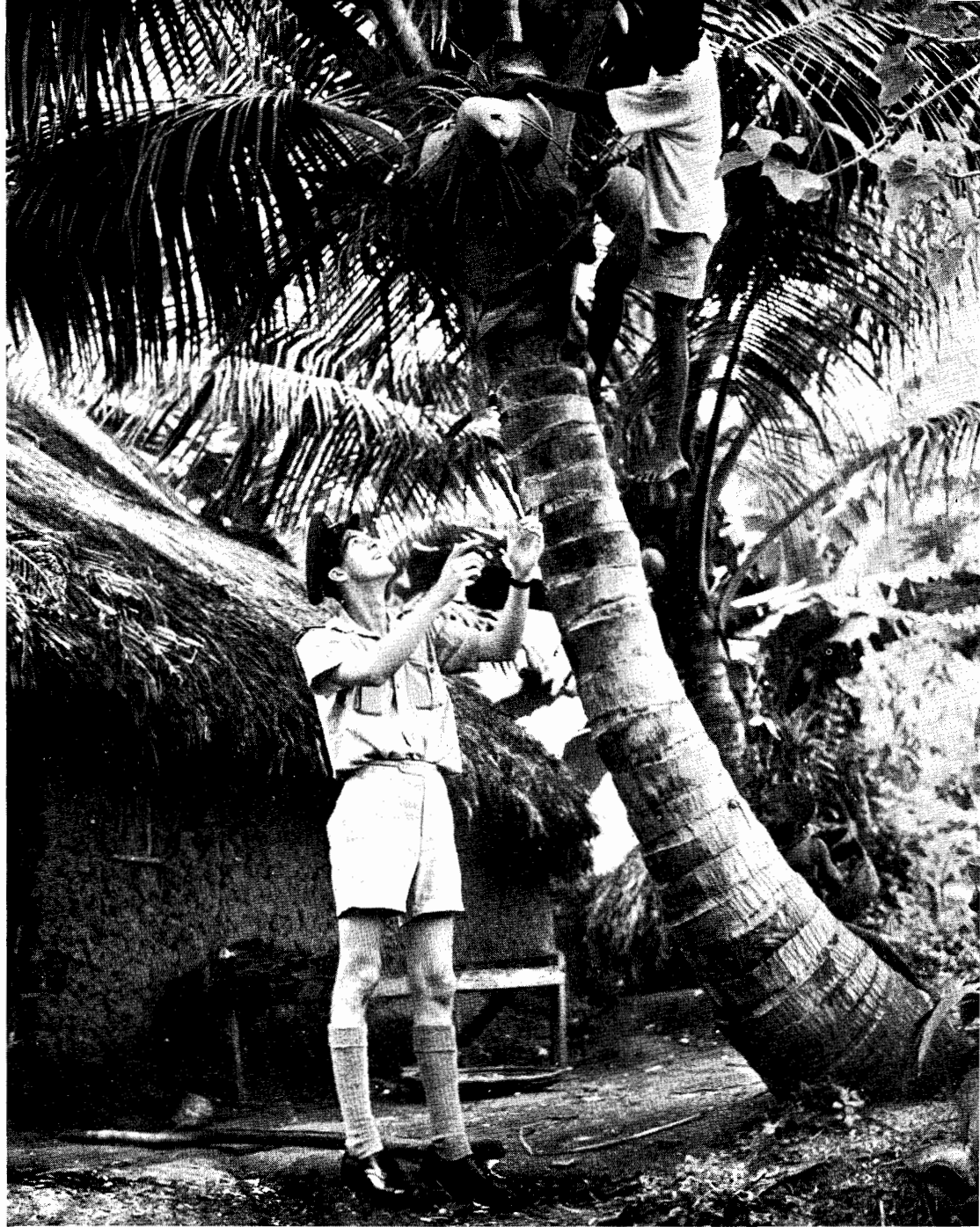
menaced our Coastal Command reconnaissance planes.

S/L Woods, the commander of this detachment, was awarded the Distinguished Flying Cross in recognition of the "fine leadership ... enthusiasm and gallantry of a high order" which he had displayed on numerous operational sorties, pressing his attacks "in a most determined manner". Joining the squadron in November 1940 when it was still flying Lysanders, he had risen from Pilot Officer to the command of a flight and then, as Squadron Leader, to second-in-command of the squadron. He had taken part in numerous low-flying attacks, photographic missions and shipping reconnaissances and led more than ten of the long range patrols over the Bay of Biscay.

Early in December a new air station which the Royal Canadian Engineers had constructed in Surrey became the home of the R.C.A.F. army co-operation squadrons, and here a third unit was organized under W/C E. H. Moncrieff, A.F.C., early in the New Year. While the new squadron proceeded with its training and Begg's¹ pilots engaged in air firing practice, the third unit, led by Waddell, spent a very busy January on operations, patrolling over the Bay, reconnoitring the Channel for enemy shipping and attacking ground targets in northern France. In one low-flying strafe on the 27th, Watlington and F/O L. W. Seath shot up seven locomotives and a high-voltage power line in the Dol-Rennes-Lamballe triangle in Brittany. As he climbed away from one very low attack on an engine near the Breton coast, Seath flew through the top of a tree, damaging the wings of his Mustang.

On January 22nd, in the course of widespread offensive operations over northern France, three Spitfires and several Venturas were shot down or forced-landed in the Channel. Many aircraft were sent out to cover and direct the subsequent air-sea rescue operations. One R.C.A.F. pilot, Knight,

¹ W/C R. F. Begg, commanding officer of the second R.C.A.F. army co-operation squadron.



F/O Raymond Hart has an assistant in scrounging.



1. Maintenance crews working on an R.C.A.F. Catalina in the Far East. 2. S/L L. J. Birchall, D.F.C. 3. A/M H. Edwards chats with R.C.A.F. fighter pilots stationed in the Far East. 4. An R.C.A.F. Catalina.

now a F/L, remained out to the limit of his petrol endurance, returning only when there was considerable anxiety for him as overdue. After orbiting over a pilot in the sea until the light failed and there was barely enough gas to carry him home, Knight returned to the coast where the defences, uncertain of his identity in the bad visibility, opened fire on him. Over the airport stretched a low blanket of cloud which made landing in the failing light most hazardous, but the pilot skilfully brought his Mustang in to complete a "very creditable performance".

February was a quiet month, operationally, for all three R.C.A.F. army co-operation units. Begg's pilots changed places with Waddell's in the Fighter Group, but few opportunities to engage in operations came their way during the month.

Spring 1943

The early part of March, on the other hand, was a very active period as the squadrons took part in a great combined army air force exercise, described as "the most extensive army manoeuvres ever held in England". Light and medium bombers, day and night fighters and fighter reconnaissance aircraft all worked together in close co-operation with the army forces, testing on full scale the organization and operation of the proposed Tactical Air Force. The two R.C.A.F. Mustang squadrons which had a share in the exercise alone made 274 sorties during twelve days' intensive flying.

Later in the month operations were resumed across the Channel, and on the 26th four pilots took advantage of favourable weather conditions to skim over the waves to the French coast in search of ground targets. One team, Hanton and F/O A. S. Collins, penetrated behind Fécamp to the main railroad between Le Havre and Amiens and, flying a few feet above the ground, attacked seven locomotives. One engine was seen to blow up as a result of their fire. The second team, Stover and F/O R. T. Hutchinson, cross-

ing to Dieppe, made hits on two more locomotives and an electrical transformer.

Spring and Early Summer

The train-busting campaign continued during the early part of April. On the morning of the 1st, Hutchinson and F/O L. A. Doherty, from Begg's squadron, swept along the French coast from Fécamp to Dieppe, shooting up electric power lines and riddling two freight engines. Later that afternoon another ground-strafting team crossed to the same area. Ten miles inland, as the pilots were looking for targets to attack, one of the Mustangs was hit by flak and crashed. The pilot, F/O R. C. MacQuoid, is presumed to have been killed. He had been an outstanding member of his squadron and was one of the two pilots in the unit mentioned in despatches in January 1943.

Some days later, on the 9th, F/Os D. M. (Bitsy) Grant and J. W. Pace, pilots in the original R.C.A.F. overseas squadron, made a record ground strafe from Ault to St. Valery-en-Caux. Flying along the railroad line between Gammaches, Aumale and Serqueux they attacked in succession 16 locomotives, destroying or damaging at least 12. The next day also provided adequate cloud cover and F/Os E. I. Hall and J. M. Robb took the opportunity to fly across to Fécamp where they struck inland and swept along on the deck to Bolbec, Yvetot and Ourville, leaving behind them three locomotives and three barges riddled with gunfire. Hitherto the Mustang squadrons had confined their activities to the daylight period but now, in April, a special flight, led by Peters, began making night raids deep into enemy-occupied territory. Their first three such operations netted an enemy bomber, three locomotives and seven or eight barges.

Peters and Bitsy Grant took off on the night of April 13th to hunt for game in the darkened skies of France. In the Paris area Grant found night flying training in progress

at an enemy airfield and closed in on a Dornier 217, which he destroyed with a well-aimed burst of fire. His victory was the squadron's first confirmed kill. Three nights later the same Mustang team flew inland from Abbeville to Noyon and Rheims, where they shot up two trains and a number of barges. A third train was bagged by Waddell on the following night. Unfortunately, Pepper, the winco's No. 2 on this sortie, did not return. Searchlights had picked up the two Mustangs as they flew across France and the intense flak which immediately opened up hit Pepper's machine, causing the cooling fluid to run out. Realizing it was impossible to reach home with his engine out of action, Pepper, after informing his C.O., baled out over enemy territory. He had made his first operational flight at the time of the Dieppe operation, distinguishing himself by completing his mission despite an eye injury. On other occasions since then, he had further distinguished himself on operations and had been mentioned in despatches for his services.

Other operations during April—defensive patrols and shipping reconnaissances—proved uneventful, but one non-operational game afforded some excitement and amusement. Fifteen pilots had been transported to points ten, twelve and fifteen miles from their air station and were then set free to attempt to make their way home without being intercepted by the police or other authorities. Several of the pilots had adventures on the way, the outstanding achievement being that of one who appropriated the car of a local magistrate which, despite all regulations to the contrary, had been left fully mobile with the ignition key in the lock!

In May the scale of offensive operations showed a marked increase as the Mustang squadrons entered more and more into the work of Fighter Command. By day and by night the campaign continued against the enemy's lines of transport and communication and against his airfields. On the 9th, Grant and F/O H. A. Blue struck across the Channel to Mezidon, in Normandy, where they separated to

hunt for targets. Blue found two trains which he attacked, returning with his wings badly damaged as the result of striking a heavy cable while taking evasive action close to the ground. His companion had been even more successful. Between St. Martin and Beaumont, Bitsy fired bursts at seven locomotives and four enemy fighters in dispersal pens and saw strikes on all his targets. A second ground strafe by another Mustang team (F/Os J. A. Morton and H. E. Walters) two days later deprived the Germans, temporarily at least, of the services of five more locomotives. In two days this R.C.A.F. squadron had put 14 engines out of action.¹

Night operations then took precedence for a time. Peters and Grant, who had made the first night sortie in April, again led off in the May tourney. Their foray into the Soissons-Rheims-Noyon area on the night of May 14th cost the Hun six locomotives, one small and eight large transport cars. Ten days later this highly successful team of train-busters was decorated with the Distinguished Flying Cross. Peters was commended for his “unswerving determination and fine fighting spirit”. The “high standard of leadership” which he had always displayed, combined with his “ability, coolness and courage”, had inspired his subordinates. His colleague, Bitsy Grant, in addition to destroying an enemy bomber in April, had damaged 18 locomotives and by his “fine fighting spirit and great determination” had set a magnificent example to his squadron.

In the course of subsequent night intrusions during May, five more engines were attacked and damaged by Waddell, Grant, Watlington, Seath and F/O A. T. Carlson. Waddell, who now had been in command of his squadron for a year, received the D.F.C. at this time—the fourth Cross won by the original R.C.A.F. unit in Britain. The citation

¹ Later in May F/Os E. N. Henderson and Hanton damaged two more locomotives and a number of freight cars during a daylight ground strafe between Vire and Pontorson.

praised him as a "fine commander and leader (whose) example of steady devotion to duty has inspired his squadron and been a material factor in the many successes achieved".

The second R.C.A.F. Mustang squadron had also been active during May, carrying out defensive patrols over the coast and shipping reconnaissances in the Channel. Several times enemy raiders were reported in the area but only once were they sighted and on that occasion the FW. 190s had such a lead that the Mustangs were unable to engage them, although they did pursue the enemy well across the Channel. Begg's pilots also joined in the train-busting forays of the R.A.F., two of them, Hutchinson and F/O B. B. Mossing, inflicting serious damage on five locomotives and making strikes on two more during a strafe of the Breton coastal region between Dol, Rennes and Lamballe. Both Mustangs were damaged, Hutchinson's when its wing was hit by ground fire and Mossing's when he struck some trees while taking evasive action.

Later in May, Begg's squadron moved south to participate in the Battle of the Bay by carrying out long-range interception patrols similar to those on which the other Mustang squadron had been engaged earlier in the year. One noteworthy incident occurred in the closing days of the month. Two Mustang pilots while on an air-sea rescue patrol sighted an upturned dinghy to which ten American airmen were clinging. After reporting the position, the pilots circled over the dinghy for an hour and a half awaiting the arrival of the rescue craft. An air-sea rescue Walrus, escorted by two more Mustangs, flew out but was unable to land, so the R.C.A.F. pilots continued their orbiting until a launch picked up the ten men. Then they escorted the launch and Walrus safely back to port.

Most decorations are highly coveted. Begg's squadron, however, has a most unusual gong which no one wishes to win or wear. This medal, a replica of the Most Highly Decoratory Order of the Irremovable Finger, is suspended

from a ribbon whose “delicate pastel mauve” is said to attract the eye admirably. It is awarded for “deeds” in which the “hero” has displayed conspicuous stupidity and lack of common sense. And the first winner was one of the squadron’s outstanding pilots!

From Army Co-operation to Fighter Command

For the average man a day consists of 24 hours, but in the armed services the day contains only 23 hours and 58 minutes. Between 2359 hours and 0001 hours there is a curious break, and what happens to, or during, those two minutes is a deep official mystery. In accordance with this peculiar calendar, Army Cooperation Command ceased to exist at 2359 hours on May 31st, and two minutes later the units formerly contained in it were absorbed into Fighter Command. This change, the result of experience gained in the North African campaign and the lessons learned in many a tactical exercise in Britain, had long been foreshadowed.

The story of the R.C.A.F. Mustang squadrons from June 1st onward is part of the story of Fighter Command of the R.A.F. Their effective strength had now increased to three, for Moncrieff’s squadron had completed its training and in the last days of May became fully operational. In June the three fighter-reconnaissance units sent out well over 175 aircraft on operations against the enemy—ground strafes, escort patrols and photographic missions by day, intruder sorties by night.

Moncrieff’s pilots, completing their first successful operations, damaged six locomotives, a number of freight cars and other targets during the first two days of the month. F/L N. S. Clarke and F/O T. M. Pethick accounted for two freight engines as they flew along the railway line from Sées to Evron late in the afternoon of June 1st. The following morning F/L F. H. Chesters and F/O A. J. Alliston added three more to the tally while train hunting between Amiens and Neufchatel. As they flew across the coast, they

also shot up two metal boats which were being beached and made further hits on electric pylons.

The same afternoon, a second team of Mustangs wave-hopped across to the Norman coast, attacked one freight engine and then turned their guns on four locomotives in the railroad junction at Airel. Intense anti-aircraft fire met the two pilots as they dived to the attack and one aircraft was shot down. Waddell's squadron lost two of its pilots at the same time, attempting a ground strafe over another part of the French coastal region. F/L W. H. Gordon, one of the missing pilots, had been mentioned in despatches for his services at Dieppe, while the second pilot, F/O R. W. Clarke, had done noteworthy work on previous lowflying sorties.

The Mustangs Again Intrude

Weather conditions were unsuitable for further ground strafes by day until the end of the month, but a full moon favoured intruder operations during the middle period of June and Waddell's pilots were busy once again. Bitsy Grant was particularly successful on these night sorties and strengthened his position as the squadron's leading train-buster by damaging six enemy locomotives, four of them on the night of June 16th. In addition to Grant's successes, Carlson accounted for two; Knight, for at least two; Woods, for one; and F/O G. A. Rogers for yet another. Other pilots made uneventful intrusions, from one of which Watlington, one of the squadron's most experienced pilots, after being heard to report over his R/T that he was baling out, did not return.

Later in the month when daylight strafes were resumed Hutchinson and F/O G. W. Burroughs of the second Mustang squadron struck into the Le Havre area, where they knocked out five locomotives with well directed bursts. June ended with a great flurry of activity as three Mustang teams carried out successful low-flying attacks. Early that

morning Hanton and Collins, from Waddell's squadron, surprised no less than 14 locomotives and forced 10 to stop as a result of their bursts. This record number increased the squadron's train-busting score to 100 damaged.

Two hours later Moncrieff's unit sent out two teams. The first pair, F/L P. Bissky and F/O J. A. Lowndes, struck across the Channel to the mouth of the Seine and then followed the railway line to Lisieux, Courtonne and Conches. No trains were to be seen, nor were there any aircraft on an aerodrome across which the two R.C.A.F. pilots skimmed. As alternative targets they fired bursts into railway sheds, shot the top off an electric pylon, and made hits on a large military truck. Turning north-east, Bissky and Lowndes followed the single-track railroad to Prey. They overtook and attacked one train, scoring many strikes. Then, continuing their flight northwards, they shot up a tug towing barges along the Seine, fired bursts at a railroad yard-engine on the right bank of the river, and finished their sortie with an attack on a power sub-station near Pavilly.

The second pair, N. S. Clarke and F/O R. G. McKessock, had during this time been following another railroad line through Rugies, Aube and Chailloué, leaving behind them a trail of two engines and numerous freight cars ready for the repair shop. Striking cross-country to another line near the coast they put a third locomotive out of action. As the pilots flew home at low level across the Channel two enemy aircraft, a Ju. 88 and an FW. 190, followed in pursuit. Clarke saw his companion crash into the sea, probably as the result of striking the water while taking evasive action.

During the early part of June, Begg's squadron had been continuing its patrols over the Bay of Biscay, escorting Mosquitos on their missions. Another special task was allotted to the squadron one evening—to escort a naval vessel on its way to sea. One section completed its patrol without incident and was relieved by another pair of Mustangs.

These two pilots, Hutchinson and Doherty had almost completed their period when three FW. 190s made a surprise attack and shot down Larry Doherty as he called a brief warning to his companion. For twenty minutes Hutchinson fought off the three enemy aircraft until the German pilots gave up their attacks and flew away. Then, despite the fact that his petrol was almost exhausted, the Mustang pilot resumed his patrol over the naval vessel and saw it safely back to port. When he finally landed after being airborne far beyond his allotted time only a few moments' gas supply remained in his tanks. Thanks to Doherty's warning and Hutchinson's gallantry the naval vessel had not been attacked during the engagement. Hutchinson was strongly commended for his devotion to duty in completing the task assigned to him despite such odds.

Following their stay in south-western England this squadron returned to the R.C.A.F. station in Surrey to join the other R.C.A.F. Mustang units in their train-busting sorties across the Channel. Just at this time Begg handed over command of the squadron to S/L J. M. Godfrey.

July and August

July was much quieter for the Mustangs, largely because of the weather, which forced the abandonment of numerous ground strafes and other operations which had been planned, and partly because of readjustments attending the re-organization of Fighter Command.

Nevertheless, both Waddell's and Moncrieff's squadrons succeeded in carrying out several sorties, although twice as many more could not be completed. On Dominion Day, Bissky and F/O R. B. Moore, while making a photographic reconnaissance over the Cherbourg peninsula, took advantage of the opportunity to interfere with electric power lines in the area and shot up a pylon. Earlier that day Hutchinson and Burroughs, from another R.C.A.F. squadron, had been forced to turn back from a ground-strafing

mission when the weather cleared over France, but as they were withdrawing Hutchinson found a locomotive which he attacked and damaged and also shot up power lines near the coast.

A week later, Hanton and Robb, from Waddell's unit, during a very successful afternoon ground strafe, added eight more to their squadron's tally of damaged locomotives, with an enemy aircraft destroyed for good measure. They encountered the latter, a Fieseler-Storch communications plane, flying at 300 feet east of Combourg. Hanton attacked first with a brief burst from head-on, stopping the Storch's engine and forcing it to land in a field. After Robb got in a short burst, Hanton dived on it again and the grey-green Jerry blew up. Continuing their flight inland along the railway to Rennes, the two Mustang pilots swung to the left along the main line running to Laval. Between these two cities they found and attacked three locomotives, all of which stopped with steam gushing from their riddled boilers. Over Laval they saw another Storch, but did not attack it as it was flying so low that the civilian populace would have been endangered. Sweeping on at ground level from Laval to Alençon, Hanton and Robb overhauled six more railway engines. Cannon bursts forced four of them to come to a halt enveloped in steam, a fifth was also hit and damaged, but a rainstorm prevented observation of the result of their attack on the sixth. This successful little outing took just 90 minutes.

On the 11th two more freight locomotives and some tank cars were added to the squadron's steadily mounting score by Collins and F/O L. W. Cocker. North of Avranches they poured bursts into tank cars standing on a siding. At Folligny Junction, Collins attacked a locomotive which gave out the usual clouds of steam. To end their sortie both pilots machine-gunned a solitary engine standing on a siding at Coutances. Then, skimming along on the deck, they struck across the Channel for their home base.

The "glorious 12th" added three more engines and a Dormer 217 to the bag of this, the original R.C.A.F. squadron overseas. Cocker, during one sortie into the Caen area, attacked a train moving along the line between that city and Bayeux, but could not observe any result. At the same time Grant and Carlson had been beating up the area between Cabourg (north-east of Caen) and Chartres. Grant attacked and saw strikes on two trains near Villy and Le Mêle-sur-Sarthe. Then, north of Chartres, he saw a Do. 217 flying at 1,500 feet and attacked it from dead astern with a 10-second burst, making hits on the fuselage and engines. The port engine blew up and the Dormer dived into the ground and burst into flames. Five men baled out as it fell to earth. Striking back towards the coast the two Mustang pilots located and attacked another train near Conches.

Some days later, on July 16th, Knight and P/O R. Knewstub attacked and made hits on another train. Eight flak guns opened fire on the Mustangs, striking Knight's mount and damaging the oil system, but the pilot managed to nurse his machine back across the Channel.

Lack of cloud cover or other unfavourable conditions prevented further successful ground-strafting operations until the latter part of July. On the 19th, however, three pilots, Clarke, Lowndes and F/O J. Watts, completed a successful reconnaissance of the eastern Cherbourg peninsula despite fairly heavy haze. Five days later the same squadron made three successful low-flying attacks in which locomotives, flak posts and pylons were the targets. That morning Bissky and F/O R. J. Manser, looking for game near Lisieux, found a freight train, attacked it and forced the engine to stop, damaged. A flak car in the train opened fire on the two Mustangs but failed to hit them.

That same morning, July 24th, another team of train-busters, Chesters and F/O F. H. Bryon, shot up four more trains and a pair of electric pylons. The first of the engines was near La Falaise; near St. Just they found a second, a

third a few miles from Beauvais and the fourth some distance east of Gournay. Strikes were seen on all four, followed by clouds of steam, and at least two of the trains came to a dead stop. In one of the trains there was a tender carrying searchlights; this too was the target for bursts. In the afternoon strafe Clarke and Watts penetrated inland to Amiens where they attacked an engine, following which they fired bursts at several electric pylons, and then, as they were re-crossing the French coast, shot up the Jerries in a flak post.

All three R.C.A.F. Mustang squadrons changed commanders during July. Waddell was succeeded by S/L W. B. Woods; Moncrieff's unit was taken over by S/L Dick Ellis; and Godfrey, who had succeeded Begg late in June, handed over his squadron to S/L Peters, formerly in Waddell's unit. Peters carried out the final Mustang operation for the month, when, with one of his pilots, he accompanied Typhoons to Poix aerodrome. While the Typhoons bombed their target, Peters took photographs of the bursts.

Intruder Operations Resumed

Night intruder operations had not been possible during July because of weather conditions, but the Mustangs took advantage of better conditions in August to carry out a number of most successful night sorties over northern France. A first attempt on August 11th, by Rogers, encountered extreme haze over the Channel, while a second the next day by Seath was frustrated when the moon went behind a heavy bank of clouds; but two nights later four pilots took off in brilliant moonlight to range over the French countryside. Three of them found no targets but Hanton made a kill over Rennes aerodrome.

On the way to his objective the Mustang pilot saw a train in motion near Vire and dived on it with his guns roaring. His bullets struck the engine and amid great clouds of steam the train came to an abrupt halt. Approaching Ren-

nes, Hanton found the airfield lit up and several aircraft in the circuit. He closed in on one, a Ju. 88, fired a burst which hit its wings and fuselage but then lost sight of the enemy as it switched off its navigation lights and dived. Next he saw a Me. 110 attempting to land and dived full out. One brief burst was enough. As the Canadian pulled up sharply to avoid a collision he saw the Messerschmitt dive into the ground "with a terrific burst of flame". The aerodrome lights were now extinguished while heavy flak batteries and searchlights came into action. Flying very low at top speed the Mustang set course for home—a very good night's hunting!

The following night, the 15th, Woods's squadron again sent out four Mustangs to make another very successful foray over Normandy and Brittany. Morton returned with another Me. 110 destroyed, while Seath and Rogers each damaged a train in the Evreux area. All four pilots encountered heavy flak during their sorties but returned with their mounts undamaged.

The moon was bright again on the night of the 16th, when another quartette searched the railroads and airfields in the Evreux and Rennes sectors, but except for ground fire there was no sign of enemy activity. The Hun was lying low. Woods' pilots were out again the next night and Hanton returned with a claim of one Ju. 88 damaged in the Beauvais area. He had spotted the enemy machine silhouetted against the moon and fired three bursts which made hits on the fuselage and wings. Intense flak then forced Hanton to take evasive action and he lost sight of the Junkers before he could engage again.

Daylight operations—low-flying ground strafes—were restricted during the early part of August by unfavourable weather. Clear skies, or, alternatively, thick haze or 10/10ths cloud on several occasions forced pilots to turn back from the French coast. On the 14th, for example, Smoky Stover and F/O Lou Thériault had to cut short their

sortie inside France because of a solid overcast of cloud pressing right down to the deck; but, before turning back, they shot up an electric pylon.

A few days earlier, on August 9th, Bitsy Grant had added another to his imposing list of achievements. Accompanied by Collins he had skimmed across the Channel from Dungeness to Cayeux and struck inland to the Seine valley. West of MantesGassicourt a bold Ju. 88 attacked the two Mustangs from behind. Whipping round in a tight turn Grant fired one brief burst headon, scoring strikes, and then getting dead astern opened fire again, making hits all over the Junkers. The Ju.'s port engine began to smoke while large pieces flew off the stricken machine. Still smoking while it twisted and turned, the enemy aircraft lost height and was last seen just above the tops of the trees in a wood. Then rain blotted it from sight. The Junkers gunners had returned Grant's fire, hitting his Mustang three times, but caused only minor damage. Next it was Collins's turn. Skimming along a road he shot up a camouflaged lorry, then turned his guns on a stationary freight train near Les Mureaux. His bursts were seen to strike home and clouds of steam confirmed the success of his attack.

Later in the month the weather improved and early in the morning of the 10th Peters and F/O Bill Blakeney carried out a "first light" intrusion over France during which they each damaged a pair of trains and took shots at a barge, a blast furnace and Jerry gun positions.

On the following day Peters's lads were out again, four teams attempting ground strafes across the Channel. Hutchinson and F/O J. C. Davidson led off shortly before 10 o'clock that morning, crossing to the Normandy coast in the vicinity of Bayeux. While Hutchinson turned his guns on a pylon and a freight engine, his companion attacked a flak post. Both pilots then fired on another freight train on the line between Bayeux and Airel and saw their bursts strike on the locomotive; steam and flames gushed out of

the damaged engine. The next two teams encountered bad weather and had to turn back, but Stover and Thériault took off at tea-time to intrude in the area around the French capital. First they found a freight train and a tug, fired bursts into both and saw steam gush out. Ten miles east of Houdan and near Rambouillet, two towns west of Paris, they found other locomotives which they attacked and damaged. On their return flight the two pilots separated over an aerodrome north of Paris, probably Enghien-Moisselles, in order to avoid anti-aircraft fire. Stover sighted a Junkers 88 flying over the airfield, pursued it and destroyed it. Then he saw a second 88 but his guns refused to fire and the Mustang pilot had to fly home—alone.

Just as he sighted the first Junkers, Smoky had heard a scraping noise over his R/T and, glancing back, saw a bright flash on the ground, followed by a plume of smoke. It was probably Thériault's aircraft hitting the ground, as he had been flying very low at the time and might have struck some obstacle. Lou Thériault's smiling cheerfulness had made him very popular with his comrades, and his loss was felt keenly.

It was over a week before another ground strafe was possible; then, at noon on the 29th, Robb and F/O E. Garry struck across the French coast inland to the Rheims area where the first pilot destroyed a Me. 109 and damaged a train. The next morning F/Os Dunc Lewis and Lew May, from another Mustang squadron, made a good bag of three engines and seven pylons. Lewis rounded off this successful hunt by beating up an enemy machine-gun post on the coast. Then the third R.C.A.F. squadron took a hand and Bissky and Watts, after making landfall at Fort Mahone, shot up a group of soldiers standing by a Nissen hut at Plage de Quend.

In addition to these offensive missions across the Channel, our Mustang pilots also carried out photographic and tactical reconnaissances over the French coast during Au-

gust. During one of these sorties, F/O P. G. Wigle encountered intense flak over Boulogne which severely damaged his aircraft; he succeeded in reaching his base safely. On another occasion Peters and three of his pilots, F/Os D. A. Bernhardt, L. F. May and G. Wonnacott, secured very successful high vertical photographs of airfields in enemy-occupied territory. A few days later Bernhardt and P/O C. B. East met two FW. 190s as they were flying over Le Touquet, but succeeded in shaking them off. Another team of pilots shot up enemy aircraft dispersed on an airfield.

Dick Ellis's squadron was also engaged in the photographic and reconnaissance work. The C.O., accompanied by Watts and F/Os E. Winiarz and Moore, photographed an enemy aerodrome despite heavy anti-aircraft fire which hit Ellis's machine three times. A few days later Ellis and three companions repeated their mission over the Cherbourg peninsula; on the last day of August, Bissky and F/O F. H. Bryon made a successful reconnaissance over the coast from Le Touquet to Ostend. Other pilots also secured photographs of French railroad yards and aerodromes during the month.

Defensive patrols along the south coast were also flown by the Mustang pilots, but without incident. The units were living under canvas during this period, gaining experience of active service in the field. Except for the heavy morning dew the pilots seemed to enjoy camping out.

CHAPTER XVIII

THE FAR EAST

ONE day in February 1942 a Catalina from one of the R.C.A.F. Coastal Command squadrons was patrolling off the Norwegian coast in freezing weather; a high sea was running below while thick banks of cloud with gusts of sleet and snow reduced visibility to zero. Five weeks later another Catalina of the same squadron took off from the palm-fringed shores of Ceylon to reconnoitre over the warm waters of the Indian Ocean. Over eight thousand miles lay between one patrol zone and the other.

For five months this flying-boat squadron had been stationed in the Shetland Isles carrying out escort patrols, reconnaissances and other missions for Coastal Command. During those months the situation in the Far East had become more and more critical. Japan entered the war; Hong Kong was taken; Malaya was overrun; Singapore fell; Burma was invaded; Ceylon and the east coast of India lay open to attack. Reinforcements for the hardpressed British, Indian and Chinese forces were urgently needed, especially additional air units to counter Japanese raids and to keep guard over the waters of the Bay of Bengal against enemy thrusts at the Indian peninsula. The Canadian squadron under the command of W/C J. L. Plant was one of those sent to fill the breach. It arrived just in time.

From their advanced northern base the Cats flew southward to Gibraltar, eastward across the Mediterranean to Cairo, then across to the Persian Gulf, past Iran and Baluchistan to Karachi, and down the Indian coast to their new base in Ceylon. On April and the first reconnaissance was carried out from the new base when one of the squadron's flying-boats swept over a great expanse of sea around the island in search of enemy shipping; only friendly vessels were sighted. Two days later Catalina "A" took off to make a second reconnaissance over the Indian Ocean. The boat and its pilot, S/L L. J. Birchall, had just arrived at their base 48 hours before, after the long flight from England; he had barely met his fellow officers before he set out on this mission. Several hours after the Catalina rose from the water a message was received from it reporting a large enemy naval force some 350 miles south of Ceylon; the position, course and speed of the enemy were given and the message ended. Some of the information was not received clearly but requests for a repetition were not answered. The Catalina and its crew of nine never returned. Thanks to their warning, the first indication that an attack was imminent, the island's defences were prepared and the Japanese forces were beaten off with heavy losses. S/L Birchall and his comrades "undoubtedly saved Ceylon from invasion".¹

Four days later history was repeated. Catalina "Y", the first of the squadron's aircraft to arrive at the Cingalese base, took off just before nine o'clock on the night of April 8th to make another search for the enemy. At the controls sat F/L R. Thomas, D.F.C., an R.A.F. officer, who, as one of the original members of the squadron, had carried out its first operational mission in October 1941. Four hours after he took off into the night sky a message began to come through from F/L Thomas's aircraft, reporting again the position, course and speed of a large Japanese convoy; the

¹ S/L Birchall, who is a prisoner of war in the hands of the Japanese, was later awarded the D.F.C.



R.C.A.F. WELLINGTON CREWS BEFORE LEAVING FOR NORTH AFRICA. Above: P/O H. F. Williamson, FS J. E. Stillings, Sgt. R. S. Campsall, FS J. E. F. Meilleur, Sgt. D. J. Turenne. Below: Sgt. J. D. Little, Sgt. M. R. Bull, Sgt. H. N. Osmond, Sgt. J. G. Denis, Sgt. G. C. Morris.



A group of R.C.A.F. aircrew survey the damage in an Italian town: FS N. L. Reid, FS T. R. Bradshaw, FS W. G. Norbury, FS R. F. Carter, FS A. J. Howes, FS E. B. de Blaquier.

signals were interrupted before the message was completed. Like its sister-ship "A", Catalina "Y" did not return. But both had fulfilled their mission; warned by their last reports the island's defences were prepared and ready for the attack. The Japanese naval and air assaults were met and checked; the enemy retired and long reconnaissances carried out by "P" and "G" on April 10th found no sign of hostile shipping in the waters about Ceylon.

During the months following the unsuccessful Japanese attack, the Cats continued their long-range anti-invasion patrols over the Indian Ocean, keeping watch lest a further attempt be made. They escorted convoys between India, Aden and Africa, hunted for enemy submarines, searched for survivors of torpedoed ships and transported medical and other supplies to out-of-the-way posts. Most of their patrols, sweeps and sorties were uneventful but occasionally some incident occurred or some special task which relieved the monotony of routine was assigned to them.

For example, on two occasions aircraft of the squadron were instrumental in rescuing survivors of ships. In late August 1942, Catalina "H" located three lifeboats containing about 60 persons and dropped supplies to them. With the co-operation of other crews, an aerial patrol over the survivors was maintained for three days. One of the patrolling Cats discovered a submarine in the area and, though its attack failed, frightened the sub away. Two months later, in October, another long search for survivors resulted in F/L R. Fursman and his crew finding one lifeboat on the 16th and WO D. S. Martin a second on the 19th. Eventually the whole personnel of the ship was rescued by aircrews of the R.C.A.F. and other flying-boat units. Customary frequent rain storms in September and October interfered considerably with operations and little flying was done from the main Cingalese base. Early in this period Plant handed over his command to W/C J. C. Scott. While the weather interfered with flying activity, the morale of the squadron was

maintained by hunting trips and games, and a swimming pool was constructed. The squadron set up its own radio station, CORN, formed a Rota Mota¹ club, and, in May 1943, began publishing the breezy little monthly, *Tropic Topics*.

Despite the long spells of bad weather, a certain number of operational flights were possible and on one of these Scott, with his crew of five, set out on December 20th on a 1,000-mile flight across the Indian Ocean to northern Sumatra. Engine trouble forced the pilot to return, but the winco transferred his crew to a Cat belonging to another squadron and took off again immediately. Eight and a half hours later, after nightfall, they made a landfall on some islands off the northern tip of Sumatra and flew down the coast line at a low altitude. All was quiet—not a light was seen. After reconnoitring this area Scott set course for an enemy aerodrome, but found only an expanse of water-logged paddy fields. Turning to his next objective, the harbour of Kota Raja, he carried out a successful dive-bombing attack before proceeding to his third objective, another harbour. But no ships or signs of life were to be seen there. Then the pilot set course homeward, landing at his base after a flight of almost 17½ hours during which he had covered 2,000 miles of open sea, “one of the longest (bomb) raids in history”. The information which Scott and his crew brought back from this offensive reconnaissance proved of great value to the military staffs. One month later the pilot was decorated with the Distinguished Service Order for his work as “a brilliant captain whose determination to complete his allotted task, whatever the circumstances, has been outstanding”. Scott had also completed a very large number of other operational missions over the Atlantic, Arctic and Indian Oceans and the Mediterranean Sea

¹ The first Rota Mota club was formed in 400 Squadron in England in 1940. The name is derived from the initials of “Rulers of the Air, Masters of the Audience”.

and had by his "courageous example . . . won the admiration of all".

With the advent of April, flying increased and the Catalinas resumed their duties of escorting warships and convoys, hunting for hostile shipping and investigating reports of enemy movements, during which they penetrated even to the Strait of Malacca. In May they took on another job when they were allotted a share in a freight transport service between Ceylon and Australia. These long flights across the Indian Ocean took from 24 to 30 hours from base to base, the first being made by Scott with a skeleton crew and cargo. Fursman and F/L P. A. Rumbold made flights on this service in June.

On June 21st Scott, who had ably led the Cats for eight months, relinquished his command to one of his flight commanders, S/L L. H. Randall. Randall, who was promoted to the rank of wing commander on taking over the squadron, had been a member of the unit since its earliest days at Stranraer in August 1941, before which he had had extensive experience on flying-boats off the east coast of Canada. Since joining the squadron he had flown over the north and south Atlantic, the Mediterranean, and the Indian Ocean.

The flying carried out from the main base in Ceylon was but a part of the work undertaken by this squadron, for at various times there were aircraft serving on detachment at Aden, in the Persian Gulf, Kenya, Natal and the Cape of Good Hope, and for many months more aircraft were on detachment than at the home base. The first of these detachments went to the Seychelles Islands for a short period in the early summer of 1942, and later that year F/L G. E. Roberts and his crew were sent to Aden, to escort convoys through Perim Strait, where Japanese submarines were known to be operating. After a month at Aden, Roberts took his Catalina up to the Persian Gulf for similar duties. In this area convoys were patrolled, new sites for advanced

bases explored and night escort missions carried out. It was here, also, that Catalina "B" completed 340 hours in the air during the two months' tour, without once becoming un-serviceable or being subjected to a major inspection—a tribute to the untiring work of the engineers. In October alone, Roberts and his crew flew on 20 out of 31 days for a total flying time of 175 hours. Early in November, "B" was relieved and Roberts and his crew returned to Ceylon. During the period of this tour of duty, while "B" was operating from Aden and the Persian Gulf, only one ship had been sunk by enemy action and that was not in the area covered by the R.C.A.F. Catalina. Fursman and F/O H. H. Fielding continued operations over the Arabian Sea until February 1943.

While these operations were going on another Cat had been detached to Kenya, whence it carried on searches for enemy submarines in the Mozambique Channel, escorted convoys along the East African coast and provided a ferry service to Madagascar and Tanganyika. During one convoy escort in December the crew sighted a submarine which, however, submerged before an attack could be made. Following this patrol, the pilot flew on to a new base in Zululand where a successful landing was made along an emergency flare path. Between their arrival at Zululand and their return to Ceylon in mid-March, after an absence of almost five months, the crew continued operations from this new base and from another in Natal.

Late in January, two more crews, captained by F/L B. H. Bayly and Randall, went on detachment north of Cape Town for almost six months, where they carried on the customary submarine patrols and escorts for convoys off the south and west African coasts. The only submarine sighted during this period was promptly attacked by Bayly and crew, who dropped three depth charges along its track.

Catalina "F" (captain, F/L W. G. Bracken) was on detachment at Aden through June and July, 1943. Its tour of

duty was hindered by various mechanical difficulties and only five operations, two convoy escorts and three anti-submarine searches, could be completed. These flights of eleven to thirteen hours' duration were uneventful. At the end of July the Catalina was flown home with spluttering engines, to undergo a major inspection.

July was another quiet month at the home base in Ceylon. Other than a few convoy escorts and numerous transit flights to other posts in the area there was little to report. One aircraft returning from a transit flight brought "three survivors", but details of this incident are not yet available.

CHAPTER XIX

FROM ALEXANDRIA TO TUNISIA

IN the early spring of 1942 an R.C.A.F. fighter squadron, commanded by S/L Paul B. Pitcher, a veteran of the Battle of Britain, was ordered overseas to another theatre of war—the Middle East. This was just a few weeks after the Catalina squadron had also left the British Isles to serve in another far distant and critical battle zone. The Mediterranean was then dangerous water for British or Allied shipping; Axis submarines and Axis aircraft threatened the thinly stretched line linking Malta with Gib. at one end of the great landlocked sea and Alexandria at the other. So the Canadian fighter squadron, instead of sailing directly to its new base of operations, was forced to make a long detour around the African continent, touching at Freetown and the Cape, resting for a few days in a camp near Durban and then sailing up the eastern coast and into the Red Sea to the final port of debarkation. It was a long, hot and wearisome voyage.

At the time the squadron arrived in Egypt in early June the situation in the Middle East was most critical. The Eighth Army, under General Auchinleck, after advancing to El Agheila, near the Tripolitanian border, in January of 1942, had been forced to fall back before Rommel's Afrika Korps to Gazala at the end of February. Late in May, while the squadron was still at sea, the Germans struck again,

rolling back the British and Fighting French forces, capturing Tobruk on June 21st and sweeping across the Egyptian frontier to El Alamein, early in July, within what appeared to be easy striking distance of Alexandria.

The first few weeks of the squadron's life in its new camp on the Suez Canal were, accordingly, filled with alarms and rumours. Air-raid warnings were frequent. Extra guards were stationed about the camp to watch for paratroops and great emphasis was placed upon adequate dispersal of personnel and equipment. Many weeks were to pass, however, before the R.C.A.F. squadron assumed an operational role. Meanwhile, during July and August, the ground personnel acted as a servicing unit for Mitchell bombers of a United States Army Air Force Group until the American ground staff arrived. Finally, early in September, Pitcher's squadron was re-equipped with Hurricanes from a Fighting French unit and the Canadian pilots took wing in the skies of Lower Egypt.

Since the latter part of July the German attack had been held along the El Alamein line while aircraft, air crews, guns, tanks, equipment and supplies poured in for the Eighth Army, now led by Lt.-Gen. B. L. Montgomery. A counter-attack was being prepared carefully.

When the R.C.A.F. pilots resumed operations on September 13th, their first duty was to maintain standing patrols high above Suez to guard that important harbour from the prying eyes of enemy reconnaissance planes endeavouring to secure information about our naval and military movements. In October the squadron moved to another station, near the Rosetta mouth of the Nile, whence the pilots carried out interception and shipping protection patrols over Alexandria and Rosetta. A detachment, equipped with Spitfires, went to Heliopolis, near Cairo, to engage in similar patrols and scrambles over the sandy wastes of the desert and the Sphinx's inscrutable smile. These defensive operations over Alexandria, Cairo and the mouths of the

Nile continued until the end of January 1943.

The work was not exciting, as few enemy aircraft were seen during the twenty-odd weeks the squadron spent in Egypt. Only five interceptions could be recorded for that period and of these only three developed into combats. On September 23rd two Hurricane pilots on a scramble over Suez sighted a Ju. 88 which escaped before they could engage it. Two days later another section intercepted a second Ju. 88 reconnaissance plane and closed in to attack. To the pilots' dismay their cannons refused to fire at the critical moment, while the enemy gunners' return fire damaged one of the two Hurricanes. The score was avenged—and with a vengeance—on the day following.

At noon on September 26th FS J. H. G. Leguerrier was on standing patrol 28,000 feet above Suez when ground control directed him to intercept an enemy machine. Ten miles to the south-east the Hurricane pilot found his quarry, another Ju. 88, and carried out two attacks at close range. The enemy reconnaissance plane spun down into the sea and exploded, while three of its crew baled out. Pitcher's squadron had opened its "victory book".

During October, when the Hurricanes were patrolling over the Nile delta and escorting convoys, only one enemy aircraft was seen. That one, a Me. 109F, escaped, thanks to its superior speed, but one of the Hurricane pilots fired a burst at long range before the Hun disappeared off Rosetta Point. No more enemy aircraft were seen until December 4th, when two pilots engaged and damaged a Ju. 88. Heavy black storm clouds hung over the sea as F/L W. H. Pentland and WO H. G. Conn patrolled their beat 60 miles north-west of Alexandria. Visibility was poor and patches of rain did not improve matters. The two pilots were beginning to count the minutes remaining for their patrol when suddenly they caught sight of a Ju. 88 low over the water. Together they dived on it, firing; black smoke began to stream from the port engine of the Junkers, but before the

Canadian pilots could repeat their attack the enemy machine turned into a rain cloud and was lost from sight. During the brief encounter some return fire was experienced but neither Hurricane was hit. Claim was entered for one Ju. 88 damaged.

Early in December a detachment of pilots and Spitfires was sent to Cyprus for a month's operations. While in the island one of the pilots, F/O J. F. Patterson, was killed in action. His burned-out aircraft was found in the foothills near Larnaka. The guns had been fired and it is believed that he had intercepted a Ju. 88 over the island, engaged it and been shot down.

Early in January more Spitfires began to arrive, replacing the Hurricanes, and the squadron, now under the command of S/L F. B. Foster, who had succeeded Pitcher in November, prepared to move forward into the Western Desert. The importance of the squadron's work during these five months is not to be gauged by the number of combats fought and victories won. Of these there were very few. Their role in the air defence of Egypt may have seemed a thankless task to the pilots engaged in the daily round of scrambles and patrols, while they looked longingly toward the Western Desert, where there was hard fighting on the ground and in the air. But the squadron's defensive patrols had been an essential factor in the vast military preparations going on during those months.

While the R.C.A.F. Hurricanes and Spitfires had been guarding the sky over Alexandria, Rosetta and Cairo, the Eighth Army had been "hitting the enemy for six". On October 23rd, the combined land, air and sea offensive had started when a breach was opened through the enemy defences. Our armoured forces poured through, and soon the Panzer divisions were on the run, leaving the Italians behind to be rounded up wholesale by our advancing forces. Past Sidi Barrani and Tobruk, across Cyrenaica to Benghazi and El Agheila, Montgomery's men chased the flee-

ing Nazis. A pause to bring up supplies, another smashing blow and again the Eighth Army rolled westward across the desert. By the end of the year it had passed Sirte, fighting on towards Tripoli, while Rommel's forces were attempting to hold the Buerat line.

Early in November the second phase of the great North African campaign had opened with the landing of General Eisenhower's American and British troops in Morocco and Algeria. The British First Army and the American and French forces were now advancing on Tunisia, in the face of strong opposition.

At the time the R.C.A.F. Spitfire squadron began its long move forward to the battle zone early in February 1943, the Eighth Army had reached Zuara, 75 miles beyond Tripoli, and about 40 miles from the Tunisian border. Hard fighting was still going on in central Tunisia, where the Americans, British and French were engaged. Foster's men had over 1,100 miles to travel to catch up.

On February 8th the ground staff set out along the coastal road across the Western Desert. Day after day for twelve days the convoy of trucks and transports moved forward, passing towns and villages whose names but a few weeks before had been headline news. Mersa Matruh, Fort Capuzzo, El Adem and Martuba were early stages in the trek.

After El Adem the scenery changed. The desert was left behind for a time and the vehicles rolled along through a green countryside, the first the men of the squadron had seen in almost nine months. Through pleasant meadows they travelled on to Barce, through Benghazi to Jemines (Gheminis), circled the Gulf of Sirte, passing El Agheila, Marble Arch, and Nofilia, Sirte and Buerat. One evening, not long after the convoy had halted for the night, enemy aircraft bombed the dispersal area, but the five 250-kilo. bombs caused no casualties. The next evening, the squadron diarist reports, there was no trouble in securing an ade-

quate dispersal of trucks and personnel, and an early “lights out”. Misurata, which the squadron reached on February 18th, was situated in another pleasant region of palm groves and green fields, a welcome sight to men choked and blinded with the dust of the transport-packed roads. They were now nearing their destination and, turning inland from Horns, the ground crew climbed the road to Cussabat where they camped overnight in an olive grove. The next morning, after removing a ten days’ growth of beard, the men drove on to Castel Benito, an aerodrome about 12 miles inland from Tripoli. The long 1,100-mile trek was over.

At Castel Benito, where their arrival was quite unexpected, the ground personnel were paid for the first time in the new “war money” and prepared to receive the Spitfires as the pilots flew them forward from the far distant aerodrome in Egypt. Montgomery’s men had by this time—the latter part of February 1943—driven Rommel’s forces back to the Mareth Line and were preparing to smash it as the other temporary barriers in their path had been smashed. From the distant rear bases more tanks, guns and supplies were moved up along the congested coastal roads and by sea to the advanced bases in Tripoli.

On February 23rd the air offensive preparatory to the assault on the Mareth defences began. Rommel struck first in an attempt to forestall the Eighth Army, but his attack was checked and thrown back and on the night of March 20th the Eighth Army launched its full-scale attack. After a week’s hard fighting the enemy evacuated his positions along the Mareth Line and retreated northward beyond Gabes to the Oued (Wadi) Akarit. At the same time, French, American and British forces in central and northern Tunisia were pressing hard on Von Arnim’s men from Guettar to Sedjenane. The end of the Tunisian campaign was near!

During this phase of the North African campaign (Feb-

ruary 23rd to March 31st), which might be termed "the Battle of the Mareth Line", R.C.A.F. Spitfires, operating from aerodromes in the Tripoli area, flew interception and harbour patrols, fulfilling the same role as that assigned them in Egypt. As a consequence, encounters with the enemy were few and far between. Only twice during the six weeks the squadron patrolled over the harbour of Tripoli did enemy aircraft appear. On April 4th, P/Os T. M. Percival and Conn (just recently commissioned), while flying on interception patrol north of Tripoli, were directed on an enemy raider. They gave chase to the Ju. 88 for some distance, firing ineffectual bursts. A week later, on the 11th, P/O J. W. Bickford had just taken off on a reconnaissance flight when he was warned that an enemy aircraft was in the area. Climbing to 24,000 feet he intercepted the bandit, a Me. 210, and closed in. The Messerschmitt rolled and dived with the Spitfire following closely. As the enemy pilot pulled out at 11,000 feet, Bickford fired again. Pieces flew off the starboard wing of the Messerschmitt while small puffs of smoke near the engine indicated further hits. Continuing the pursuit the Spitfire pilot finished his ammunition and then made dummy attacks, forcing the enemy machine down to sea level. "I continued attacks from above (the pilot reported), coming as close as 15-20 yards, hoping to cause the enemy aircraft to crash into the sea, as it was flying just off the water." For 30 or 40 miles the chase continued until Bickford had to turn back towards his base, claiming one Me. 210 damaged. Once again, it must be emphasized, absence of combats did not mean the squadron was flying in vain. On the contrary, it was of the utmost importance to provide adequate fighter cover for the sea and land convoys which were bringing up vital supplies and to guard the bases where those supplies were being unloaded.

Meanwhile a detachment which had been sent forward in mid-March to an aerodrome at Ben Gardane, just across

the border in Tunisia, had seen something of the battle in progress and had scored the squadron's second "kill". One of their duties was to escort convoys along the Tunisian coast. It was while engaged in this work on March 22nd that Foster saw an aircraft flying close to the water. Diving down to investigate, he identified it as a torpedo-carrying He. III and attacked until his ammunition was exhausted. Then he called in his companions, Pentland, F/O D. E. Bruce and P/O J. R. Harmer, to finish the job. Their bursts soon set the Heinkel on fire. After jettisoning its torpedo the Jerry crash-landed in the sea, floated for a moment or two and sank. A boat from the convoy which the enemy had been attempting to attack picked up survivors.

In addition to the convoy patrols Foster's pilots in this detachment on several occasions escorted Baltimore and Boston light bombers while they attacked objectives over the Mareth Line and beyond Gabes. No enemy fighters attempted to interfere.

By mid-April the battle zone had advanced further north into Tunisia and the Canadian fighter squadron moved again, this time to join in the final assault which ended the campaign in North Africa and opened the way for the invasion of Sicily and Italy. On April 6th the Eighth Army had broken the enemy's line at Oued (Wadi) Akarit and again driven Rommel in headlong flight. Sfax fell on the 10th, and Sousse on the 12th. The First Army, too, had pushed forward through difficult country and the hard-pressed Axis forces were now confined in the north-eastern corner of Tunisia behind a line running roughly from Enfidaville through Pont Du Fahs and Medjez-el-Bab to the Mediterranean coast west of Bizerta.

On April 16th the R.C.A.F. Spitfires began operating from their new base behind the battle line and were immediately drawn into the thick of the action raging over and behind the Enfidaville line. On their first day the pilots had a stern reminder that their work now would be different

from that which had been their lot for the past seven months. That morning their wing commander, W/C I. R. Gleed, D.S.O., D.F.C., gave a talk to the pilots at dispersal. The same afternoon he failed to return from an offensive sweep. Veteran of the battles of France and Britain, victor in a score of combats, Ian Gleed was one of the outstanding pilots of the R.A.F. For the next four weeks, until all enemy resistance in Tunisia had ceased, the R.C.A.F. squadron went out literally every day, two, three or even four times, sweeping over the battle area, escorting Kittyhawks on their bombing and strafing missions, patrolling to intercept enemy transport planes.

Yet on all these squadron sorties during April and May, encounters with the enemy were few. On the afternoon of April 19th the squadron, twelve Spitfires strong, was escorting Kittyhawks northwest of Cap Bon when 20 or more Me. 109s, diving out of the sun, bounced the Canadian formation from behind. Four Spits went spinning down from that first onslaught; their pilots, F/Os D. E. Bruce, J. Riley and L. C. Grant, and P/O G. C. Armstrong, were posted missing. Another pilot, F/O E. W. Mitchell, evaded the first attack by a steep turn to port and, on pulling out of his turn, found one of the enemy fighters square in his sights. A long burst, in which Mitchell used up all his ammunition, shot off the Messerschmitt's long-range belly-tank, together with pieces of the starboard wing root, and made the engine vomit streams of black smoke. But while the Spitfire pilot was concentrating on the one Messerschmitt four more got on his tail and opened fire, forcing him down to sea level. Heading for the coast with two of the enemy in pursuit, Mitchell finally shook them off and returned to his base.

Meanwhile F/O B. N. M. De Larminat had fired a burst into one of the Messerschmitts, but his own aircraft was hit by bullets from another Jerry which came down behind him. A sharp turn into the sun shook off this attacker but

“by that time (De Larminat reported) I could not see anything but 109s around me, many of them”, so, like Mitchell, he spiralled down to the deck and headed for home across the peninsula. Near Nabeul he overhauled two low-flying Ju. 87s, fired a few cannon rounds at one and then finished his Browning ammunition on the second. The second Stuka at once dived steeply and as the Spitfire pilot flashed across it, only 100 feet in the air, he was confident that it could not pull out of the dive before crashing into the ground.

On Easter Sunday the R.C.A.F. pilots made four squadron sorties, three times to escort Kittyhawks and a fourth to cover air-sea rescue operations in Hammamet Gulf. From the last sortie F/O A. E. Pourbaix did not return.

The second air action was fought on April 28th when the squadron was again escorting Kittyhawks off Cap Bon. Two enemy aircraft, a Me. 109F and a Macchi 202, attempted to bounce red section of the Spitfire formation, but Bickford positioned himself behind the Messerschmitt as it pulled out of its dive and fired several bursts which put the engine out of action. The enemy pilot broke away, glided down, and apparently forced-landed on the beach. While Bickford was damaging the Messerschmitt, P/O J. S. Bushe had engaged the Macchi, shooting pieces off the cockpit cover. The Italian fighter then began to spin violently with white smoke pouring out. Some seconds later a large splash was seen near two ships off the coast, marking the spot where the enemy had crashed into the sea. This was the squadron's third kill in the North African campaign.

Through early May, as the last enemy defences about Tunis and Cap Bon were being overwhelmed, the squadron continued its work of escorting Kittyhawk bombers while they strafed the roads of the enemy's retreat or attacked enemy shipping attempting to evacuate the remnants of the German forces from Cap Bon. On the 7th, Tunis and Bizerta fell to General Eisenhower's forces, and on the 13th the last enemy troops surrendered. North Africa was free!

During those last two weeks the Canadian Spitfires had no encounters with the enemy. The Luftwaffe had been driven from the skies of Tunisia.

Already preparations were being made for the next move, and on May 8th the squadron escorted Baltimores bombing Pantelleria.

During the latter part of May aircrew and groundcrew were able to enjoy a well-earned leave in Cairo and Alexandria, returning to their aerodrome in Tunisia to undergo a toughening-up course in readiness for Sicily.

The conditions under which these men who were now to be "toughened up" had been living are best described in the words of the commanding officer:

We have lived in the sand under canvas since our arrival in the Middle East, and by this time are quite inured to the heat of the day and the cold of the night, sand, flies, fleas and mosquitoes, endless bully-beef and hard tack-all aside from the expected hazards of War with the Eighth Army. . . . Our ground crews are the only Canadian airmen who are real front-line soldiers . . . exposed to bombing, strafing and the threat of German commando raids. This has but made them the keenest ground crew in the R.C.A.F.-since they have a very personal interest in the efficiency of the fighters overhead.

Our relaxations are few. Cards and letter writing fill our evenings, whilst swimming, when we are near the Med., and softball are our recreations. Just as it is possible to follow the route of the New Zealand divisions from Alamein to Agheila by abandoned rugger fields, so our path could be traced by rough baseball diamonds in the sand. No gang of back-lot kids ever treasured two bats and three well-worn balls as do we. Our other exercise is the immediate digging of slit trenches after each of our frequent moves. Each tent takes as much pride in its trench as a householder does in her garden and they brag about the speed with which they dive into theirs when occasion arises.

In addition, we have the finest five-piece swing band in the desert, led by P/O Johnny Koplitz, of Hoboken, former American band leader, and greatly in demand by Army and Air Force units far and near. Lacking movies and concert parties, this band has filled in many a dull evening.

Toughening up, they say!

CHAPTER XX

AND ON TO SICILY

WHEN the attack on Sicily began in the early summer of 1943 the R.C.A.F. day fighter squadron had been joined by three night bomber squadrons, so that Canadian air crews were able to take a hand in the round-the-clock air offensive which preceded the actual landings.

These three bomber squadrons, led by W/Cs D. McIntosh, D.F.C., G. A. Roy, D.F.C., and J. M. W. St. Pierre, formed an all-Canadian wing under Group Captain C. R. Dunlap. In mid-April they had started preparations for their move, Canadianizing their personnel as far as possible, re-equipping with new Wellington aircraft, and drawing tropical kit. A month later, in the middle of May, the ground crews embarked for North Africa.

For the first few days (one squadron diarist recorded) life aboard ship was a lazy one for almost all, no doubt due to the sudden inactivity and change of weather. Unfortunately concerts could not be arranged, due to lack of space, (but) small groups would gather around for sing-songs. Those not on duty devoted their time to card playing, reading, writing, sun bathing or gazing at the other ships in the convoy. The seas were comparatively calm and only for one day did we experience anything like a storm. It would have been an uneventful trip had not enemy aircraft appeared. Bdmb's were dropped (but) no damage (was) reported. Our destroyers occasionally dropped depth charges....

With slight alterations here and there, the above passage describes the great majority of convoys!

Landing at Algiers, the squadrons moved forward to an aerodrome in the Sousse area where the aircrews, who had flown out from England early in June, joined them towards the end of that month.

Like the convoy, the aircraft received attention from the Luftwaffe as they flew across the Bay of Biscay and some air fighting occurred. A squadron engineering officer, flying as passenger in one Wellington, noticed several Junkers closing in, and mistaking them for more Wellingtons, wondered why they were flying in such close formation!

On their new station in Tunisia the men lived in tents, utilizing stoves which had been improvised from cast-off equipment, empty cans, and other suitable items salvaged from dumps.

On June 26th the first operation was carried out by the two squadrons led by McIntosh and St. Pierre, and from that night onwards R.C.A.F. Wellingtons were actively engaged in the bombing campaign which softened the enemy's defences in preparation for the invasion of Sicily.

Two features are very prominent in the story of that air offensive. First, the weakness of the enemy anti-aircraft defences: time after time one reads in the crew, reports, "enemy defences weak (or negligible)". Except for one or two key points, such as Messina and Naples, the anti-aircraft guns were few in number and inaccurate in fire; searchlights likewise were few and ineffective and night fighters were rarely seen. This was in sharp contrast to the terrific opposition from flak, searchlight cones, and enemy fighters which had been the lot of the R.C.A.F. aircrews on their earlier bombing operations against German targets. As a result our Wellingtons were able to bomb their objectives from much lower altitudes than were possible over the Reich, and our losses were on the whole extremely light. It might be added, too, that in contrast to the operations of



ABOVE: R.C.A.F. airmen in North Africa. Sgt. Jack Demison, FS John Carpenter, FS Robert Habbeshaw, FS Robert Brown.

BELOW: Aircrew in Burma. F/O F. D. Jolicoeur, Sgt. J. B. Neville, S/L P. J. T. Stephenson, D.F.C., a F/O of the Burma Volunteers.



1. FS F. B. Lummis, G.M. 2. P/O B. C. Paige, D.F.M. 3. LAC K. M. Gravell, G.C.
4. S/L A. U. Houle, D.F.C.

home-based Bomber Command the raids in this theatre were usually favoured by good weather.

The second marked impression is the high tempo of the operations; night after night for as many as five without a break, the squadrons sent out six, ten, twelve or more aircraft each.¹

What this meant for the ground crews who had to service, fuel, bomb and check the aircraft, can be fully appreciated only by those who had to work with them in the heat and the sand, living in tents, tormented by flies and subsisting on rations that were sometimes insufficient in quantity and poor in quality. North Africa may cast a romantic spell in the pages of a P. C. Wren or on the screen of a Hollywood super-spectacle, but to the men who flew and fought there it was anything but a fairyland.

The squadrons went out from their English bases happy and enthusiastic at the prospect of seeing another part of the world; most of them were disillusioned. War, of course, is like that!

At first, to be sure, it did seem a land of milk and honey, or rather of eggs and wine. In the first days after their arrival, before they had moved on to their operational base, the ground crews were able to enjoy eggs three times a day, and test the cheap, plentiful—and potent—native wine. Unfortunately, that soon changed, and when only service rations were obtainable,² life became much less pleasant.

Sand was everywhere—except when it rained. Then one of the torrential North African storms would convert the airfield into a sea of mud in a few moments, and the men, soaking wet, dirty, and miserable, had to bed down in

¹ Between June 26th and July 31st R.C.A.F. Wellingtons carried out operations on every night except six—July 18th, 24th, 25th, 27th, 29th and 30th.

² One kind-hearted American paratrooper won the gratitude of an R.C.A.F. squadron by presenting it with some cases of American canned goods.

trucks or aircraft or wherever they could find a reasonably dry spot. A day or two later the sun would beam again, dry everything up in quick order—and then the sirocco would blow in from the desert and sand would penetrate everywhere. And always it was “ruddy” hot!

Water, naturally, was at a premium. Supplies for cooking and drinking had to be hauled many miles in bowsers and chlorinated before use. Swimming parties to the Mediterranean beach at Sousse were organized for air and ground crews as frequently as possible. Ken McAdam, the Y.M.C.A. Auxiliary Services Officer, was very helpful in arranging these and other recreations for the men. A mobile bath unit visited the squadrons weekly.

Despite these conditions, in spite of all hardships (and the airman, like the soldier, is by nature a grumbler) the squadrons carried on, did their job, and did it well. The story of their operations falls naturally into three phases:

1. preparing for the invasion of Sicily (June 26th-July 9th);
2. the invasion (July 10th-August 17th);
3. preparing for the invasion of Italy (August 18th-September 2nd).

The first operation carried out by the Wellingtons on the night of June 26th was marked by one of the very few encounters with enemy night fighters and one of our few losses. The target for this initial R.C.A.F. raid was the landing ground at Sciacca, a small town on the south-western coast of Sicily. There was some flak over the target area and our aircrews reported that searchlights appeared to be co-operating with night fighters in trying to break up the attack. One night fighter, probably a Ju. 88, attacked one of our Wimpies but the rear gunner, FS J. P. Goyette, was on the watch and fired a six-second burst at point-blank range. A few moments later an aircraft was seen burning on the water off the Sicilian coast, substantiating Goyette's claim to have destroyed the enemy. One of our aircraft, however,

did not return and a wireless operator air gunner in Goyette's crew was wounded during this attack.

On the following night San Giovanni, on the Italian mainland across from Messina, was the target. Once again the weather was favourable and there was good visibility over the target. Light flak fire was weak and inaccurate. Yet the attack was not a great success. The flares were scattered and as a result the bombing was not well concentrated. Some bursts were seen in the freight yards, ferry slips and docks and a few small fires were seen. Probably the most interesting incident of the night's work was the experience of one crew who, taking off with a 4,000-lb. bomb, had the misfortune to drop it just as the Wellington became airborne. Fortunately the heavy bomb did not explode and the aircrew, unaware of what had happened, flew on to the target. One Wimpy was lost during this raid.

On the next two nights Messina was bombed. On the first, (June 28th) the defences were few and ineffective; the next night aircrews reported that the flak was heavier and increased in intensity during the course of the raid. A smoke screen was also used in an attempt to foil the bombers. Our losses, four aircraft, on these two raids were heavier than for any others during this period. One crew, forced to ditch their kite in the sea when the gasoline was exhausted, were rescued by American naval craft after being adrift on the Mediterranean for eleven hours. The rear gunner had been drowned in the crash-landing.

From Messina the attack shifted to Cagliari in southern Sardinia, which received two successive blows on June 30th and July 1st. Favoured by good visibility and assisted by flares the crews made a very successful attack the first night. Bursts, including several 4,000-pounders, were seen on and near the main railroad station and the barracks. One large and several smaller fires were started in the dock area. There, too, the defences were weak; searchlights were few—some crews reported only one in action; and only one night

fighter was seen. On the following night there was again little opposition from the inaccurate anti-aircraft batteries and few searchlights at Cagliari; much more effective was the ground haze which made accurate pinpointing very difficult for the bomb aimers and as a result this attack was less successful than that of the previous night.

By way of contrast a raid on Olbia in northern Sardinia on July 2nd appeared to hit an arsenal, as successive explosions were seen for several minutes. One particularly large blast shot flames into the air for 500 feet or more and fires which followed could be seen burning 20 miles away. Once again the crews reported no searchlights and little anti-aircraft fire and all agreed that it was "a very good show". The members of the crew of one Wellington, which ran out of gasoline on the return flight and was forced down near the coast of Tunisia, were rescued, slightly injured.

Another "good effort" was made against the naval dockyards, railroad station and yards at Trapani in western Sicily on the next night. This important base had more defences than most of our targets, but they were little more effective. Certainly the twentyodd searchlights did not appear to be of any help to the anti-aircraft gunners whose bursts were as inaccurate as usual. On the same night aircraft from McIntosh's squadron scattered a million propaganda leaflets over the Rome area.

For the Fourth of July, Villacidro aerodrome was the objective assigned. Here there were no defences whatever, although some flak was encountered as our aircraft flew over Cagliari en route to the target. The bomb aimers, aided by flares in pinpointing the aerodrome, started good fires.

The neutralizing of the Axis airfields continued through the next few nights as the date of the invasion drew nearer. On the 5th the important group of aerodromes and satellites at Gerbini, the chief air base in Sicily, from which the blitz of Malta had largely been conducted, was dealt an effective blow. Somewhat surprisingly the defences here were scat-

tered. Few anti-aircraft guns came into action in the target area and the searchlights were negligible. The first wave of attacking Wellingtons found good weather in the target area, but a later wave encountered cloud and very heavy haze, with the result that their attack was somewhat scattered.

Gerbini aerodrome was attacked again three nights later, when our bombers made more hits on the runways and started numerous fires. In the interval the defences had been strengthened and this time the heavy and medium flak barrage was fairly accurate. One Wellington had a brief encounter with a Ju. 88, but despite this all our aircraft returned safely.

Between the two attacks on Gerbini the squadrons had also attacked the aerodrome at Catania in Sicily on July 6th and 7th. Although on both nights some heavy anti-aircraft fire was experienced south of that city, the defences over the target itself were quite weak and some crews reported they were nil. One Wellington was hit by flak as it flew in to the target, but the captain, F/L J. C. H. Delisle, completed his attack and made a masterly landing at his base with both tires flat and the bomb doors open.

One night during the pre-invasion period, the Wellingtons were standing by, ready to take off, when one caught fire. In a few moments the gas tanks and bombs exploded, scattering shrapnel and blazing fragments over a great area. A second kite caught fire and went up with another tremendous roar, causing scores of grass fires which endangered the whole camp. But all available personnel pitched in to fight the flames and help the injured; thanks to their "almost superhuman efforts" the fires were soon extinguished. Many an officer and airman—from the Group Captain commanding the wing, down to AC2s—did valiant work that night in averting what might have become a major disaster.

On the night of July 9th the invasion forces set out across the narrow strip of sea to Sicily. Over them flew the

medium and heavy bombers of the North-West African Air Forces to lay an aerial barrage covering their landings. R.C.A.F. objectives that night, in addition to patrol duties over the invasion barges, were the railroad station, yards and docks at Catania and Syracuse and the aerodrome at Caltagirone. At Catania, where there was some flak but only weak searchlight opposition, the primary target was easily identified, thanks to clear skies, good visibility and the light of flares, and our crews reported accurate bombing on the railroad station and docks. One crew saw its bombs set a ship in the harbour on fire. At Syracuse the defences were quite weak and another successful and accurate attack was made on the railroad station, yards and docks which were the primary objectives. P/O V. Ardis of McIntosh's squadron, who was detailed to fly in low with a 4,000-lb. block-buster to destroy the barracks and railroad centre in the town, brought back photographs which clearly showed the success of his attack. The third objective, the aerodrome at Caltagirone, was left a mass of flames after our bombers had passed over.

Meanwhile other Wimpies had been patrolling over the sea and the island's coast. These aircraft and the bombers reported seeing large numbers of barges and ships of all kinds converging on the Sicilian landing beaches. The whole south coast of the island appeared to be lit up by fires and flares and at Syracuse the enemy's searchlights were seen to be playing over the water, hunting for our naval vessels which were shelling the shore.

For the first four nights of the invasion period our medium bombers continued their attacks on Sicilian objectives and then, from July 14th onwards, left these targets to the light bombers while they flew further afield to blitz targets on the mainland.

Enemy aerodromes remained the primary objectives for our bombers, with harbours following as a close second. On the night of the 10th, following the successful landings

earlier that day, the Wellingtons again bombed the airfields at Gerbini. Opposition was still negligible and, aided by good visibility, our crews dropped their bombs accurately on the aerodrome. Several crews saw Allied forces landing at Gela that night while others reported a large convoy in the bay off Augusta, where naval units were shelling the town. Many fires were still burning on the south coast of Sicily.

The R.C.A.F. effort that night was curtailed by an unfortunate accident. One Wellington blew up just as it was about to become airborne, killing the whole crew and scattering wreckage over a great area. Nevertheless, the squadron which suffered this loss despatched a strong force the next night, the eleventh, to attack the enemy airfields at Montecorvino-Ravella on the Italian mainland near Salerno. Cloudless skies and perfect visibility permitted another good prang of the targets. Hits were seen on aerodrome buildings at Montecorvino and on the hangars at Ravella and a large fire which was started on the latter aerodrome could be seen blazing 40 miles away.

Enna, in the centre of Sicily, was our target for the night of the 12th, when two squadrons despatched strong forces. There again the usual story was repeated—defences nil; target easily identified by the light of the moon and flares; accurate bombing from 4,500 to 8,000 feet; fires, accompanied by a blue-white explosion, in the target area. Dummy fires which the enemy started, to divert the attack, did not deceive our bombers.

The next night, July 13th, it was Messina's turn. The railroad yards and docks suffered another concentrated and accurate attack from a force of bombers which included two dozen Canadian Wellingtons. The Canadian crews reported two large explosions in the dock area, followed by a big fire which lit the sky for 20 miles. Enemy defences over this important target, which was vital for the movement of reinforcements to or the evacuation of troops from Sicily,

were active and fairly accurate. In addition to flak, searchlights and night fighters, the enemy used an ineffective smokescreen to defend the target. Several crews saw one aircraft explode in mid-air and another go down in flames. One Canadian bomber did not return that night.

From Messina the attack shifted now to the Italian mainland and for the remainder of the month the Wimpies were employed chiefly in raids on targets in the Naples area with a few in the toe of the peninsula. Sicilian targets could now be left to shorterrange aircraft.

The docks and yards at Naples were bombed twice during this period by the R.C.A.F. squadrons. On the first night, July 14th, there was a bright moon, affording very good visibility, and a very successful attack was reported. As at Messina the defences about Naples were much stronger than over most Italian objectives. The smoke screen was ineffective, but searchlights working in cones of six or seven co-operated with the heavy anti-aircraft batteries which were more accurate than usual. One Wellington was hit by a flak burst, which was thought to have come from flak ships in the harbour. Enemy night fighters were also about, but apart from one brief burst of machine-gun fire our aircraft had no encounters.

A week later, on the 20th, the second attack was made on Naples. One aircraft acted as illuminator, dropping flares over the yards and docks while the others identified their particular targets and made a well concentrated attack. The defences were again active, with 50 to 60 searchlights operating in cones, but this time the guns were less effective, and the smoke screen was, as usual, of no avail to the defenders. In addition to the bombs, our aircraft showered pamphlets over the city, reminding the Italian people of the choice which was theirs.

The near-by airfield of Capodichino was the objective for four attacks during the last half of July. Three of the raids were carried out by two squadrons together, while all

three took part in the fourth operation. On the night of the 16th a considerable force of our Wellingtons was able to identify the aerodrome in the light of the moon and flares and saw the sticks of bombs burst across the runways and buildings. Several aircraft on the ground were observed to explode and burn and many fires were started. Huge fires were also burning in the Naples dock area. Defences were active, several of our aircraft being coned by searchlights over the target and subjected to light and heavy flak; when one R.C.A.F. Wimpy was hit, the bomb aimer, F/O J. M. Burk, suffered slight injuries.

All three squadrons were over the same target three nights later, on July 19th. This time, in contrast to the previous raid, the visibility was poor, with a heavy haze making pinpointing extremely difficult. The defences, too, were much stronger than before; 50 to 75 searchlights were in action and at least half of our Wellingtons were coned at one time or another during the raid. Night fighters with headlights co-operated with the searchlights, and one of our bombers had a brief encounter. Flak was heavy and accurate, particularly to the north and west of the aerodrome. Despite this opposition all our aircraft returned safely, bringing reports of large fires on the target and other aerodromes in the area.

The third raid on this objective, on the 21st, was also hampered by cloud and heavy haze over the area. Identification of the target was almost impossible and as a result the attack was not well concentrated, as only a few of the bombers could catch a glimpse of the landing ground. The others released their sticks over flak concentrations or by dead reckoning. Flares were used in attempts to illuminate the target but many of them appeared to be very wide of the mark. Flak and searchlights were active, but ineffective, although one of our bombers did not return. Once again Naples was showered with leaflets.

A week later, on the 28th, our bombers returned to Ca-

podichino, only to find similar conditions prevailing, when 8/10th clouds made pinpointing very difficult and only a few crews caught fleeting glimpses of the target. As a result, the flares again appeared to be off the target and the bombing was scattered. Naturally, results could not be observed and little accuracy was claimed. For the first time, incendiaries were carried by R.C.A.F. Wellingtons in this theatre of the war.

In addition to the docks at Naples and the aerodrome at Capodichino our aircraft bombed the aerodrome at Montecorvino on two occasions, on July 17th and 26th. The first raid was hampered by cloud and ground haze, but opposition from the enemy was negligible, only one or two guns appearing to be in action. Our crews reported many bursts on or near the landing ground, dispersal area and administration building and numerous fires sprang up, some of which seemed to be aircraft burning on the ground. One of our Wellingtons developed engine trouble while returning from this raid and when the starboard motor burst into flames, the captain ordered his crew to bale out, jumping himself when the bomber was only 500 feet above the ground. Two of the crew unfortunately did not bale out and were killed; the other three, however, were merely bruised.

The second attack, on the 26th, was favoured by excellent visibility and little defensive opposition. Flares further illuminated the target and the crews were able to make accurate bombing on the runways and dispersal area. Most of the crews were able to observe their own bomb bursts and several reported seeing two 4,000-lb. bombs explode on some buildings on the north-west side of the aerodrome.

Salerno, south-east of Naples, was attacked on July 22nd on a cloudless night. As at Montecorvino the defences were negligible, only one or two guns and no searchlights coming into action. Good hits were made on the railroad yards, starting large fires, and leaflets were again showered over the area.

While the area between Naples, Montecorvino and Salerno bore the brunt of the attack during the last half of July, raids were also made on San Giovanni and Reggio, the two ports on the Italian mainland across from Messina. The first raid, on the night of the 15th, started many fires in and around the docks and ferry slips at both ports, the glow from which could be seen for 50 miles. The defences even here were relatively weak; the searchlights, few in number, operated singly and were of little avail, although one aircraft was held in a beam for several minutes. Flak caused some damage to one of our bombers. Enemy night fighters were also about, and one Wellington did not return.

Equally successful results were reported from the second raid, eight nights later on the 23rd. S/L J. P. McCarthy, D.F.C., dropped flares over San Giovanni which lit up the target and made identification easy. One very large red fire was started and was visible 40 miles away. The defences were more active and the guns, some of which appeared to be firing from a flak train on a siding south of the town, co-operated more effectively with the searchlights. One of our aircraft did not return.

The last operation of the month was a small-scale leaflet raid over Naples and Rome on July 31st. The Duce had fallen by this time—his resignation was announced on July 25th—and there appeared to be a lull in the bombing while the new administration of Marshal Badoglio decided what to do.

August

The lull in the bombing storm was of but brief duration. At the beginning of August our Wellingtons again became active, going out night after night, for as many as ten or eleven without a break, to smash the Axis harbours and railroad yards, to blast the last shreds of Italian resistance in Sicily and to harass the Nazis as they attempted to withdraw their hard-pressed forces.

The first raid, on the 1st, was directed against Randazzo, an important railway and road junction north of Mt. Etna. The visibility was very poor, due to thick haze, and although there was no opposition from flak or searchlights over the target, the attack was a disappointing one. The objective was difficult to find even under good conditions and on this occasion some of our crews spent 40 to 50 minutes circling the area in vain attempts to pinpoint.

The following night Naples was subjected to another attack which was reported a success, despite haze over the area. The defences were poor, light flak being quite inaccurate. On the 3rd an exceptionally good attack was made on Paola, an important station on one of the major railroad lines used by the enemy for the movement of troops and supplies along the west coast of Italy. Visibility was good over the target area and flares dropped by the illuminator aircraft made identification an easy matter. Numerous bursts were observed on the railroad repair shops, yards and buildings with two 4,000-lb. bombs falling squarely in the yards.

Over this target, too, the defences were negligible with only one or two guns in action and, for a short time, only one searchlight.

For the next two weeks, August 4th-17th, the bombing attack was concentrated on the north-eastern corner of Sicily and the toe of the Italian boot, as our bombers continued their nightly shower of bombs upon the evacuation beaches.

On the 4th all three R.C.A.F. squadrons bombed Messina, starting fires and causing explosions. There was some flak over the target area but our force suffered no losses. The beaches between Messina and Cape Peloro were the objective for the next night, but the visibility was once again poor and haze prevented precise observation of any results.

After another successful concentrated attack on the

docks and yards at Naples on the night of the 6th, our bombers returned to their work of beach-blasting to block the Sicilian evacuation. Bright moonlight and the glow of flares lit up the beaches at Scaletta and Capo Bardi on the night of the 7th as a large formation of our Wimpies released their cargoes. The Messina beaches were attacked five nights in a row from August 8th to 12th, with good results except on the 9th when cloud made pinpointing very difficult. The defences were as a rule weak and ineffective, although heavy flak was encountered over Cape Peloro on the night of the 12th, when one of our Wellingtons failed to return. A few enemy aircraft were seen but no combats resulted. One night one of our crews went down to 20 feet to shoot up barges and the beaches near Torre di Faro.

Landing beaches on the Italian mainland were bombed again on the night of the 14th when railroad lines, small craft, beaches and villages between Pizzo and Lamezia were attacked under favourable conditions. Many fires were burning fiercely as the Wimpies turned back towards their base.

While the bombers were pranging the beaches, other Wellingtons were showering pamphlets over Florence, Modena, Leghorn, Pisa and Bologna. A bomb attack on the railroad junction at Viterbo, north-west of Rome, was less successful. The flares were wide of the target and as a result the bombing was scattered. Nevertheless two large fires were started in the railroad yards and one large explosion was seen.

After two final attacks on the landing beaches of the mainland on the 16th and 17th, the Sicilian campaign came to an end. On the first night a heavy onslaught was made on barges north of Palmi and direct hits on the railroad station in the town were also reported. On the following night two crews made direct hits on a railroad bridge crossing a river three miles north-east of Pizzo while others saw a fuel storage dump go up in flames.

On the 18th, for the first time since the month opened, no R.C.A.F. Wellingtons went out on operations. Although they had not all operated on every night, one squadron had carried out 16 raids and the others 15 each in a period of 17 days!

After the fall of Sicily bombing operations were concentrated on the communications system of southern Italy, and during the last two weeks of August these targets were repeatedly attacked. The yards at Foggia were the first objective to be raided, on the night of the 19th, when all three of our squadrons made a successful attack. Visibility was good and accurately placed flares further facilitated identification. The flak defence was moderate but fairly accurate. The Villa Literno yards, north-west of Naples, were bombed the following night. Once again visibility was very good and the illuminators' flares were most effective. Bombs were seen to burst squarely on the yards and junction and it was believed extensive damage was caused, while electrical installations were also hit. Defences over the target area were negligible but some flak was encountered over Naples.

Another railroad junction at poorly-defended Battipaglia, southeast of Salerno, suffered a concentrated attack on the 21st. After a night's rest the campaign against railway yards and lines was resumed on the 23rd with an attack on the yards at Bagnoli junction where bursts were observed on the yards, the junction and steel works in the vicinity. Another key point in the Naples area, Torre Annunziata, below Mt. Vesuvius, was visited on the next night under conditions of excellent visibility. A well-concentrated prang was carried out which must have caused enormous damage to the yards and steel works. Numerous direct hits and many good sized fires were reported. Next it was Taranto on August 25th, where our Wellingtons caused great disorganization in the yards. A petrol dump also appeared to be hit.

On the 26th the squadrons again had a stand-down, returning to the attack on the 27th with a raid on the Salerno yards which was well concentrated. It was believed that the yards would be unserviceable for some time to come but, just to be sure, another attack was made on Salerno on the last night of the month. Flak opposition was lively at first but died down as the raid progressed. Once again good bursts were seen on the yards and town area.

Taranto also received a second visit on the night of the 28th. There was some flak over the target, with a few searchlights, while a ship in the harbour laid a smoke screen. But our illuminators laid their flares bang on and the bomber crews claimed many direct hits. The following night, the 29th, Torre Annunziata also had a second call from the R.C.A.F. The Wellingtons made a concentrated attack and claimed many direct hits, including two by 4,000-lb. bombs between the steel works and yards.

CHAPTER XXI

L'ENVOI

THIS narrative has dealt exclusively with overseas operations and the deeds of gallantry performed by Canada's sons in the face of the enemy. It should, however, be remembered that gallantry is not confined to these far-flung squadrons. Cases occur from time to time among the less glamorous activities of the home front and when the opportunity arises sons and daughters of the R.C.A.F. meet every test.

But two instances will be cited. In the late months of 1941, L.A.C. Karl Mander Gravell was under training as a wireless operator air gunner at No. 2 Wireless School, Calgary, when his chance arose. In recognition of Gravell's gallantry on that occasion a posthumous award of the George Cross was made. The citation for the award follows:

R.97644 LAC K. M. GRAVELL,
Flying Squadron, No. 2 Wireless School, Calgary, Alta.

On November 10, 1941, Moth, Wireless Training, No. 4833 crashed in Simons' Valley and immediately burst into flames. The Trainee Wireless Air Gunner, LAC K. M. Gravell, managed to extricate himself from the wreckage and get clear. In spite of the intense shock caused by the loss of one eye and severe burns, suffered at the time of the crash, LAC Gravell's first and only thought was for the welfare of his pilot so, finding that his pilot was still in the aircraft and

ignoring the fact that his own clothes were ablaze, he attempted to get back to the flaming wreckage to pull his pilot clear, but had barely reached the aircraft when Mrs. F. Walsh (School Teacher) at great danger to herself, ran up and dragged him away. Mrs. Walsh rolled him on the ground to extinguish the flames which had, by this time, completely enveloped his clothing.

LAC Gravell subsequently died from his burns. Had he not considered his pilot before his own safety and had he immediately proceeded to extinguish the flames on his own clothing, he would probably not have lost his life.

The majority of cases of gallantry referred to in this narrative have had to do with flying operations and aircrew personnel, but the ground crew from time to time are placed in equal peril and display the same characteristics as do their more publicized colleagues.

FS F. B. Lummis of R.C.A.F. Station, Trenton, is one of the ground crew who has had such an opportunity and his action at the time brought him the award of the George Medal.

The citation of FS Lummis' award is as follows:

9867 FS F. B. LUMMIS,
R.C.A.F. Station, Trenton, Ontario.

On the 22nd, of December, 1939, this airman was engaged in draining gasoline from an aircraft in a hangar at R.C.A.F. Station, Trenton. As a result of an electric light breaking into a gasoline can, the gasoline was ignited. Sgt. Lummis seized the flaming can and after two attempts succeeded in removing it from the hangar. In this act of bravery he showed total disregard for his personal safety and the greatest courage as by the time he got outside he was a mass of flames. He thereby saved 12 aircraft which, at this date, were invaluable to Canada's air-training plan.

ORDERS, DECORATIONS AND MEDALS AWARDED
TO R.C.A.F. PERSONNEL SERVING OVERSEAS,
UP TO SEPTEMBER 1st, 1943.

1. The Editors hope that no names have been overlooked. Omissions, if any, will be included in later volumes.
2. Awards of chivalry, mentions in despatches, and honours in recognition of good work on the ground, which have been numerous, have not been included but will be published in a later volume.
3. Rank shown is that held at time of the award.

DISTINGUISHED SERVICE ORDER

W/C Llovd Vernon Chadburn, D.F.C.	F/O Michael Shakespeare Layton
F/L Ralph MacLaren Christie	F/L Joseph Charles McCarthy, D.F.C.
W/C John Emilius Fauquier, D.F.C.	W/C John Charles Scott
S/L Reginald John Lane, D.F.C.	F/L John Harlan Stickell, D.F.C.

MILITARY CROSS

F/O Harold Fesler Marting

DISTINGUISHED FLYING CROSS AND TWO BARS

S/L James Elmslie Walker

DISTINGUISHED FLYING CROSS AND BAR

F/O Leslie Patrick Sandford Bing	S/L Hugh Constant Godefroy
F/L William Lawrence Chisholm	F/L Leslie Cyril Gosling
F/L Donald Curtin	S/L George Urquhart Hill
P/O Harry Woodward Donkersley	W/C Keith Louis Bate Hodson
S/L Charles Stuart Dowie	F/L Thomas William Lewis
W/C John Clarke Fee	F/L Harry Deane MacDonald
S/L Leslie Sydney Ford	F/L Harry Malkin
F/L Robert Carl Fumerton	S/L Vincent Cronkite McAuley
F/L Henry Wallace McLeod	S/L Harry Shapiro

DISTINGUISHED FLYING CROSS AND BAR (*Continued*)

S/L Robert Wendell McNair	P/O Walter Scott Sherk
WO Herbert Victor Peterson	F/L John Alexander Spence
F/L Dallas Wilbur Schmidt	F/O Daniel Revie Walker

DISTINGUISHED FLYING CROSS

S/L William Houghton Adams	P/O Alfred Dale Bouschard
P/O Roy Matheas Ahalt	P/O Robert Douglas Bowen
F/O Frederick Alan Aikman	F/O William James Bracken
F/L Robert Wilfred Alexander	F/L Clare Willis Bradley
P/O Frederick Charles Allcroft	W/C Douglas Alexander Ransome Bradshaw
P/O Daniel Frederick Allen	F/L Alfred Burrell Brenner
F/L Earnest Ellwood Allen	S/L Norman Hobson Bretz
F/L Leslie Scofield Anderson	F/L Malcolm George Brown
P/O Peter Murray Anderson	P/O Arthur Gaston Brunet
S/L William Andrew Anderson	P/O Douglas John Alexander Buchanan
F/O William Robert Weir Anderson	F/L Robert Andrew Buckham
P/O Favell Clinton Annand	P/O Colin Summers Campbell
F/L Phillip Leslie Irving Archer	F/O Robert Joseph Campbell
F/L William Albert Armstrong	F/L Ross Guthrie Campbell
P/O Lloyd Fisher Austin	F/O Duncan William Carmichael
F/L Alan Frederick Avant	P/O Jean Pierre Henri Carrère
F/O Gordon Halse Avent	W/C Henry Myles Carscallen
F/O Donald Thomas Bain	F/O Gordon Henry Francis Carter
P/O John Douglas Norman Bain	F/O Ronald George Carter
F/L Edward Donald Baker	F/O George Allan Casey
F/L Edward Saunders Baker	P/O Lewis Marmaduke Cavanaugh
F/L William Henry Baldwin	S/L Lloyd Vernon Chadburn
P/O William Alexander Renton Barry	F/O Frederick Jackson Chittenden
P/O Albert Mansfield Beach	P/O James Oliver Christie
F/O Harry Beckett	F/L Robert Douglas Church
F/L Jerrold Walton Bell	F/L Donald Hartford Clark
P/O John Kopf Bell	S/L John Frederick Percival Clark
P/O Frank Malcolm Benitz	P/O Ralph Johnston Clark
F/O Gordon Bennett	F/O Arthur Wellington Clifford
F/O Donald Ashton Beresford	F/O Richard Emmet Cline
P/O Seymour Bernard	P/O Richard Seymour Clinton
P/O Jack Pershing Berry	P/O Nelson Alexander Cobb
P/O Robert Charles Berry	P/O Millard Wright Coles
F/O Ross Herbert Bertran	F/O William Wilson Colledge
S/L Leonard Joseph Birchall	F/L Walter Allan Grenfell Conrad
F/L Donald James Mathew Blakeslee	F/L Robert Geoffrey Cook
P/O Charles Richard Blumenauer	F/O Herbert Lindsay Coons
P/O Stephen Boczar	P/O Frederick Charles Cooper
P/O Boris Oleh Bodnar	P/O William Henry Farrell
S/L Foss Henry Boulton	
S/L Vaughan Bowerman Corbett	

DISTINGUISHED FLYING CROSS (*Continued*)

P/O Stanley Cyril Cosburn	W/C John Emilius Fauquier
F/O Irving Clark Cowan	F/O William Burdette Fee
WO Jesse Edwin Cox	P/O Harvey Wesley Fenton
F/O James Patrick Coyne	P/O Harry Elmore Fenwick
P/O Ernest Brazier Cozens	P/O Douglas Coutts Ferguson
P/O Gordon Robson Craddock	W/C William Donovan Swanzey
F/L Basil Glynn Crew	Ferris
P/O William Dennis Crimmins	P/O Gilbert Kingdon Finnie
P/O George Travis Crossman	F/L Gordon Clayton Fisher
F/O Gordon Charles Crowther	P/O Earl Francis Flanagan
P/O Bruce Darwin Croxton	P/O David Stewart Florence
P/O Leonard Frederick Cuddington	P/O Clifford Foderingham
P/O Marcel Redmond Charles	P/O George Paget Fowler
Cuelenaere	F/O James Henry Foy
F/O Roy Harvey Cunningham	F/O Frank Stanley Foyston
F/L John Harvey Curry	P/O Alan John Francis
P/O Stanley Julian Cybulski	P/O James Earle Francis
P/O Howard Earl Dabbs	W/C Lennox Gordon Douglas Fraser
P/O Robert Gordon Dale	F/O Phillip Gustave Freberg
P/O Sylvester Danahy	F/O William Maynard French
P/O Frederick Benjamin Dashper	P/O Joseph Leroy Fulsher
W/C Paul Yettvart Davoud	F/L Vaughan Francis Ganderton
P/O Ernest Akos Frederick De Bartok	F/L David Austin Garbutt
P/O George Andrew Deering	P/O Glen Powell Gardiner
P/O James Donald Dickson, D.F.M.	WO Llewellyn Hugh Coverdale
F/L William John Dierkes	Gardiner
F/O Charles Edward Dingle	F/L Raymond Gardiner
F/O Wilfred Lloyd Dobbin	F/O Eric Alonzo Garrett
P/O Earle George Dolby	F/L Heath Boulton Gattley
P/O Joseph Alexander Theodore	F/O John Gellner
Doucette	F/L Joseph Vernon Gibson
P/O Donald Charles Dougall	F/O Douglas Lloyd Giggey
F/O John William Patterson Draper	F/O William Thomas Hicks Gill
P/O John Appleton Duncan	S/L Edward Gerard Gilmore
P/O Edward Garth Dundas	P/O Edward Lester Gimbel
P/O Peter Eastcott	F/L Edwin Herbert Glazebrook
F/L James Francis Edwards, D.F.M.	F/L Albert Ernest Glazer
F/L Richard Atwill Ellis	P/O Gordon Leonard Glover.
WO Clarence Ronald John Emberg	P/O William Campbell Gordon
F/O Joseph Arthur Emery	F/O Duncan Marshall Grant
WO Earl Thomas English	F/L Frederick Ernest Green
P/O James Paul Erly	S/L William Robert Francis Grierson-
P/O Robert Sherlock Eustace	Jackson
P/O Earle Robert Evans	F/O Anthony Wreford Gubb
P/O James Alan Fairley	F/L Douglas Creswell Hagerman
P/O Franklin Meredith Falls	F/O Alfred Roy Haines
P/U Herbert William Edgar	F/O Gerald Joseph Francis Kelly
Hammond	F/L Ian George Secord Keltie

DISTINGUISHED FLYING CROSS (*Continued*)

P/O Leonard Stanley Hammond	F/L Edgar Cardiff Kendall
F/O Raymond Joseph Hardingham	F/O Irving Farmer Kennedy
P/O Russel Harling	S/L Delford Harold Kenney
P/O Howard George Harrower	P/O William Edward King
F/O Paul Albert Hartman	F/L Wier Clayton Klassen
P/O Harold Kenneth Campbell Harvey	P/O Kingdon Roger Knapp
F/O Elvert John Haugen	P/O John Kingsley Knights
P/O Hugh Burns Hay	F/L George Denis Scott Koester
P/O Peter Heaton	P/O Lorne Edward Kropf
F/L Douglas Woods Henry	P/O George Walter Kusiar
P/O Roy Alexander Henry	WO Joseph Francis LaFrance
P/O John Brock Higham	F/L Albert Lambert
P/O Howard Stephenson Hill	P/O George William Lancet'
F/O William James Hilton	F/L Reginald John Lane
P/O George Alexander Holmes	F/L Thomas Henry Lane
P/O Harold Clifford Hoover	F/O William Cecil Langstaff
WO Joseph MacInnes Horan	P/O Dallas Laskey
P/O Russell Lloyd George Hosea	P/O Irvin Lauckner
F/O Albert Ulric Houle	F/O Arthur George Lawrence
F/L Allison Brant Howell	P/O James Robert Laws
F/O Ezra Lorne Howey	F/O Harold Thomas Legge
F/L John Hudson	P/O Philip Edward Meric Leith
F/O Arthur Gordon Hunter	F/O Frank Edward Lewis
WO Arthur Richardson Hunter	F/O John Frederick Lewis
P/O Graham Stanley Hynam	F/L Harold Lester Lindo
F/O Ross Baxter Ingalls	P/O Robert Andrew Livingston
P/O Leonard Thomas Jackson	S/L Lloyd Emerson Logan
S/L David Sinclair Jacobs	P/O James Cameron Lovelace
S/L Garnet Franklin Jacobsen	P/O Leslie Rowland Bond Loving
P/O Harold Jack Jennings	F/L Harry Burns MacDonald
P/O Warring Laird Jennings	F/O Charles Edward Macintosh
WO Leonard Alfred Johnson	F/O Donald Philip MacIntyre
F/O Brian Earl Johnston	F/O Kenneth Alexander MacKenzie
F/O John Douglas Johnston	F/O Malcolm Graham MacKenzie
F/L Frank Everett Jones	F/L John Angus MacLean
F/O Thomas Reid Jones	F/L Charles McLaughlin Magwood
F/L Burton Norris Jost	S/L Dennis Graland Malloy
F/L Thomas Augusta Julian	F/O Gustave Henry Edwin Maloney
F/L Oliver Charles Kallio	P/O Lloyd Robertson Mann
P/O Francis Albert Kay	WO Joseph Henri Arthur Marcotte
F/L George Clinton Keefer	F/L Francis Peter Marsh
F/O Norman Alexander Keene	P/O Stanley Sinclair Martin
F/O George Noel Keith	F/O Theodore John Martin
S/L Frederick Wishart Kelly	P/O William Hooker Mathews
F/L Elmore Hugh McCaffery	P/O William Mead Maxwell
F/O Joseph Charles McCarthy	P/O George Bremner Murray
	P/O Sidney Leon Murrell

DISTINGUISHED FLYING CROSS (*Continued*)

P/O Joseph Porter McCarthy	WO Frank Henry Mylrea
F/O John Lefroy McCaul	F/L Eugene Lawrence Neal
WO Richard Charles McClelland	F/O Alexander Roy Neilson
F/O Alexander McClure	S/L Arthur Deane Nesbitt
F/O John Edward McClure	P/O Roland MacRae Newitt
F/L John Edward McCormack	S/L William Francis Montgomery
F/O Maurice Robert McCullagh	Newson
S/L John Terrence McCutcheon	WO Arthur Nicholl
P/O Henry Hutchinson Lewis	P/O Robert William Nixon
McDaniell	S/L Geoffrey Wilson Northcott
P/O Charles Parkinson McDonald	P/O Lawrence James O'Connell
F/O John Gordon McDonald	P/O William John Joseph O'Connell
P/O John Robert McDonald	P/O Peter Joseph Oleinek
F/O Thom Ross McDougall	P/O Ian Campbell Ormston
F/O John Frederick McElroy	F/O Keith Hartley Owens
P/O John Joseph McGavock	P/O Ernest Franklin Paige
F/L Patrick D'Arcy McGee	P/O Charles William Palmer
F/O George Glover McGladrey	S/L Frank Weir Parker
F/L Gordon Roy McGregor	P/O Walter Franklin Parks
F/O Bruce Gordon McIver	P/O Ward Clifford Parsons
P/O George Stuart McMenemy	P/O John William Patterson
F/O Lawrence McMillan	F/O Eric Wesley Patteson
F/L Charles Robert McMills	S/L John David Pattison
S/L Ernest Archibald McNab	P/O Edwin Amos Paulton
F/L John Gordon McNeill	S/L George Thomas Pearson
P/O Kenneth James Metheral	F/O Ronald Peel
P/O Joseph Julius Miesen	F/O Coleman Douglas Perkins
F/O Harold Thomas Miles	F/L Herbert Peter Peters
P/O Ernest Vernon Miller	F/L Maurice William Pettit
F/L Jacques George Mills	F/O Laurie Evan Philpotts
S/L James Bert Millward	F/O Thomas White Pierce
P/O Earl Edward Morgan	P/O Thomas Oswald Pledger
F/O Owen Horace Morgan	P/O George Robert Pool
F/O Jerrold Arthur Morris	P/O Lloyd Woodrow Powell
F/L Donald Robert Morrison, D.F.M.	F/L Peter Geoffrey Powell
P/O John Robert Morrison	P/O John Reginald Price
F/O Roy Gordon Morrison	S/L Lyall Basil Burman Price
S/L Robert Ellis Evan Morrow	F/O Charles Stanley Wright Proctor
P/O Earl Frederick Morton	P/O Reynold Norman Quinn
P/O Ronald Claus Moyer	F/L John Arthur Rae
F/L Victor Allan Mulhall	P/O Thomas Henry Reeves
P/O James Francis Munro	F/O Gordon Louis Reneau
F/L Burton Durrell Murchie	P/O James William Bromley Reynolds
F/O Keith Campbell Murphy	P/O John Aldridge Reynolds
P/O Matthew John Murphye	F/L Oliver Brook Robertson
F/O Victor Rolfe	P/O John Henry Symons
F/O Frank Adams Roper	P/O Torger Harlo Taerum

DISTINGUISHED FLYING CROSS (*Continued*)

WO William Donal Fraser Ross	P/O George Bertram Tait
P/O Alfred George Rowe	P/O Richard Winter Taylor
S/L Georges Albert Roy	P/O John Kearns Tett
P/O Hector Bernart Rubin	P/O James Scholes Thomson
P/O William Orson Rublee	F/O Norman Thorp
F/O Blair Dalzel Russel	P/O Reade Franklin Tilley
F/O Alfred John Delaune Ruttledge	F/O Henry Tilson
F/L Joseph Jean Paul Sabourin	WO John Fielding Wrench Towse
S/L Joseph Logan Savard	F/L Robert Irwin Trickett
F/L Robert Alfred Schoales	F/O Theodore Trilsbeck
F/O Donald Gairn Scott	P/O Patrick Charles Howard Tripp
WO William John Senger	F/L Gordon William Troke
F/O Gordon Leonard Shemilt	P/O Bruce Haynes Tupper
P/O Wilbert Andrew Shoemaker	F/L Harry Brown Turnbull
F/O Douglas Dalton Shuttleworth	F/O John Howard Turnbull
P/O William John Sibbald	F/O Geoffrey Turner
F/O Donald Wallace Simpson	P/O George Pierre Cornelius
S/L Clive Baldwin Sinton	Vandekerckhove
P/O Eric Arthur Skilleter	WO William Corbett Vanexan
P/O Albert Smith	WO Anton John George Van Rassel
F/O Albert Ivan Smith	P/O George Alexander Vinish
F/L Frederick Douglas Smith	W/C Robert Charles Arthur Waddell
P/O John Gordon Smith	F/L Bradley Reardon Walker
WO Kenneth Charles Alfred Smith	WO Harold Allen Walker
F/L Nicholas Smith	P/O Orville Ray Waterbury
F/L Roderick Illingsworth Alpine Smith	F/O Frederick Charles Ernest Waterman
WO Carl Edward Sorsdahl	F/O Thomas John Davies Waterman
F/O Frederick Gordon Spanner	F/O Allan Ivan Watts
P/O Percy Edwin Spence	F/L Jack Vincent Watts
F/O John Rutherford Sterne	F/L Alfred Ernest Webster
F/O William- Meredith Sterns	F/L Clifford Farrar Westerman
P/O George Alfred Harding Stevens	F/L Arthur Brian Wheeler
F/O William Joseph Stevens	F/L Paul Berkeley White
P/O Herbert William Stewart	F/L James Whitham
P/O John Harlan Stickell	P/O Geoffrey Bruce Whyte
F/L Harold Keith Stinson	F/O Thomas Richard Wilby
P/O Clifford Campbell Stovel	F/O Richard Pennington Wilkin
F/O John Henry Striebel, Jr.	F/L David John Williams
S/L William Reid Suggitt	P/O John William Williams
P/O Ransom Harold Sutton	P/O Duncan Roy Wiseman
F/O Warren Waugh Sutton	S/L William Blakeney Woods
F/O George Andrew Sweany	P/O Jerauld George Wright
F/L William Herbert Swetman	F/O John Garn Wright
P/O John Earle Swingler	P/O Gordon William Young
	P/O Jerome Arthur Zee

CONSPICUOUS GALLANTRY MEDAL (FLYING)

Sgt. John Calder Bailey	FS Alan William Jessup Larden
FS Kenneth William Brown	Sgt. Leonard Franklin Williamson

GEORGE MEDAL

FS David Mervin Coates	Sgt. Thomas Breech Miller
P/O Raoul De Fontenay Jenner	FS Delbert Cecil Moore
F/O Henry David Link	Sgt. Clinton Landis Pudney

DISTINGUISHED FLYING MEDAL

FS George Douglas Aitcheson	Sgt. Edmund Bruce Carleton
FS Edward Sudbury Alexander	Sgt. Thomas Edward Carlon
Sgt. Hugh John Anderson	FS Robert Burns Charters
Sgt. Leslie Lester Anderson	Sgt. Mack Chepil
Sgt. Murray Bouck Anderson	Sgt. George Theodore Chretien
FS Elmer Harold Anthony	Sgt. Lloyd George Collins
FS Sidney Back	FS Phillip Frederick Connell
FS John Bertram Baker	FS Benjamin Cook
FS Stanley Herbert Balkwill	FS Robert George Craft
FS James Hamilton Ballantyne	Sgt. Kenneth William Craig
FS Jack Standish Banks	FS Walter David Craig
Sgt. John Frederick Barrick	FS James Waldron Creeden
FS Joseph Arthur J. Barsalou	FS Knowles Eugene Crosby
Sgt. Douglas Glen Bebensee	FS David MacLeod Crozier
FS Harry Beckwith	FS David Alexander Cumberland
FS Gordon Cecil Douglas Bell	Sgt. Russell Edward Curtis
Sgt. Ronald George Bell	FS Francis George Dagg
FS William Thomas Bent	Sgt. Melville Hernias J. Dalphond
Sgt. Eldon Kenneth Bergey	FS Charles Edmund Darby.
Sgt. Bruce Martin Berven	FS Charles Edward Delany
FS William Walter Bigoray	Sgt. Harold Edison DeMone
FS Arthur Adelbert Bishop	FS John McBride Dempster
FS Jack Montgomery Bissett	FS Desmond Michael DeSilva
Sgt. Joseph Pierre G. Blanchet	FS James Donald Dickson
Sgt. Reginald Jack Booth	FS George Garfield Dockendorff
FS Libert Joseph Boucher	FS Carroll Joseph Donahue
Sgt. Joseph Maurice L. Bouvier	FS Thomas Henry Donnelly
Sgt. Benjamin Douglas Boynton	FS John Earl Dorie
Sgt. Charles Lorne Bray	FS Russel Dorland
FS Philip Sibbald O. Brichta	FS Walter William A. J. Drechsler
Sgt. George Joseph R. Bruyere	Sgt. Harold Clinton Duffield
FS Charles Henry Bullock	FS James Francis Edwards
Sgt. John Robert Arthur Burke	FS William Ernest Egri
FS Lewis Johnston Burpee	FS Johann Walter Einarson
Sgt. James Robert Burton	Sgt. Raynard Charles Elliott
FS Cyril Thomas Butler	Sgt. Richard Warren Ellis

DISTINGUISHED FLYING MEDAL (*Continued*)

Sgt. Wilfred Canter	FS James Harvey Evans
Sgt. George Hugh Falloon	Sgt. Edward Reeves Long
FS Alvin Peter Fast	Sgt. Edward John Lowans
FS Arthur Edward Fay	FS Clarence Philip Lundeen
Sgt. George Ferrell	FS Donald Malcolm MacDonald
Sgt. George Patrick Finnerty	FS Ronald Ernest MacFarlane
Sgt. Charles Allan Fisher	FS Alexander Gerald MacKenzie
Sgt. David Scott Fisher	FS Gordon Thompson MacKenzie
Sgt. Joseph Edgar Galloway	FS Donald Arthur MacLean
Sgt. Stanley Gaunt	FS Ian Roy MacLennan
FS Harry Lewes Gill	FS William Drisbrow MacMonagle
FS John Harvey Gillmore	FS Bruce Campbell MacNab
FS Gordon Leslie Hennings Goodall	Sgt. William John Maitland
FS Harold Goodwin	FS Cedric Stanley Marsh
Sgt. Cameron McKenzie Goudy	Sgt. Douglas Christopher Martin
Sgt. James Greenshields	FS John Lamont Matthews
FS Alexander Morgan Halkett	Sgt. Lionel Wollaston Matthews
FS Frank Fletcher Hamilton	FS Edwin Matthew McArthur
Sgt. William Fisher Harris	FS John Kenneth McAvoy
Sgt. Arthur Harrison	Sgt. Harry Lindsay McBeath
FS Lorne Weller Haunts	FS Desmond McCabe
FS Francis Joseph Higgins	FS David John McCoy
Sgt. Frederick Staples Hiley	FS Charles Parkinson McDonald
FS William LeRoy Hubert Hill	FS Thomas Oswald McIlquham
FS Edmund Anthony Hinke	FS William Philip M. McIntosh
FS Douglas Palmer Hobson	FS Leo Murray McKinnon
Sgt. James Shepard Holland	FS James Marcellus Meagher
Sgt. Lawrence MacLeod M. Holtby	Sgt. Arthur Alured Mellin
FS Alexander Manson Horne	FS Wayne Thomas Merrick
FS Garth Edward Horricks	Sgt. Banks Earle Mitchell
FS Bruce Borden Hosick	Sgt. George Eric Mitchell
FS Lyle Walker Humphrey	Sgt. Paul Emile Morin
Sgt. Richard Neil Hurst	Sgt. Frederick Joseph Moritz
FS William Henry Keane	FS Benjamin Henry Moroney
Sgt. Stanley John Kernaghan	FS Allan Wilson Morris
FS Henry James Forster Kerr	FS Donald Robert Morrison
FS Daniel Baird King	Sgt. Harry Morrissy
FS Frederick Charles Kruger	FS Carl Lowell Morton
FS George Herbert Lancaster	Sgt. Donald Moss
FS Frederick Hugo Larson	FS Robert Gerald Mullen
FS Alan MacNeiley Laughland	FS Kenneth Francis Neale
Sgt. William Herbert C. Leavitt	FS Arthur Farrand Nitz
Sgt. John Campbell Leckie	FS Sinclair Holmes Nutting
Sgt. William Holt Ledford	Sgt. Stefan Oancia
Sgt. Robert Joffre Leet	FS Robert John Oates
Sgt. Joseph Hector Charles A. Lepine	FS Howard John O'Connor
FS William Thomas Lewis	Sgt. Erwin Earl Osler

DISTINGUISHED FLYING MEDAL (*Continued*)

FS Raymond Claude Lockhart	Sgt. Bertram Courtney Paige
FS Harry Eugene Patch	FS Edward Chester Stewart
FS Alfred Charles Paulton	FS William Eber Stewart
FS Douglas Roland Pearce	FS Robert Stewner
FS Charles Woodrow Wilson Peck	FS Gordon James Struts
FS Joseph Eugene R. Pichette	FS Frank Alexander Sutherland
FS Eric Manford Pierce	FS Gordon Grant Sutherland
FS William Jeremiah Porritt	FS Murray Laurence Swanson
FS Earl George Price	Sgt. Ernest Alfred Taylor
Sgt. Gordon Richard Price	Sgt. Harold Alan Taylor
FS Charles Joseph Quinn	FS Ralph Edgar Taylor
Sgt. Guy Henri Rainville	FS Thomas Templeman
Sgt. John Thomas Ratcliffe	FS Edwin Horton Thomas
FS Donald George Reid	Sgt. Lucien Irving Thomas
Sgt. William Leonard Reinhart	FS Henry Freeman Tice
FS Henry Holmes Richardson	Sgt. Robert Ernest Tod
Sgt. Joseph Jean Nicolas Rivard	Sgt. William Barker Townley
Sgt. Mark Roach	FS Walter Palfrey Trask
Sgt. Wilfred Roach	Sgt. James Gillham Trebell
Sgt. Joseph G. Laurent Robillard	Sgt. Robert Steele Turnbull
FS Cecil Robinson	FS Noel Cecil Turnour
FS Cecil Arnold Robson	FS Francis Mark Tutton
FS Allan Lawrence Ross	FS Everitt Thomas Vachon
Sgt. Joseph Moore Runner	FS William Lorne Vander Dasson
FS Ervine Edwin Rutledge	Sgt. Earl Freeman Warren
FS Bernard Leo Schauenberg	FS Hubert Fortescue Watlington
Sgt. Norman Leslie Schofield	Sgt. James Dowdney Watts
Sgt. Clarence Garfield Scott	FS Robert Lorne Weatherall
FS Robert Albert Shannon	Sgt. Claude Weaver
Sgt. William Ralph Shellington	FS Howard Robert Welch
FS Clifford Alvin Shirley	Sgt. Edward Eugene Wertzler
Sgt. John Leonard Smale	FS Richard John A. Wheatley
Sgt. Alfred Graham Smith	FS Murray Edward White
Sgt. David MacMaster Smith	FS Robert John White
Sgt. Donald Victor Smith	FS George Edgar Williams
Sgt. Leslie Smitten	Sgt. James Mills McKay Williams
FS James Allan Sneddon	FS Thomas David Withington
FS Delbert Dale Soderquist	Sgt. James Douglas Woodburn
FS Robert Leslie Spence	FS John Ralph Woolley
FS Lewis Albert Spraggs	FS Warren Herbert Wortley
FS William Harry Stephenson	FS Reuben William Wright
Sgt. Leroy Carl Stevens	FS Guy Philip Aldrich Yates
FS Angus William Stewart	FS Franklin Roy Zulauf

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